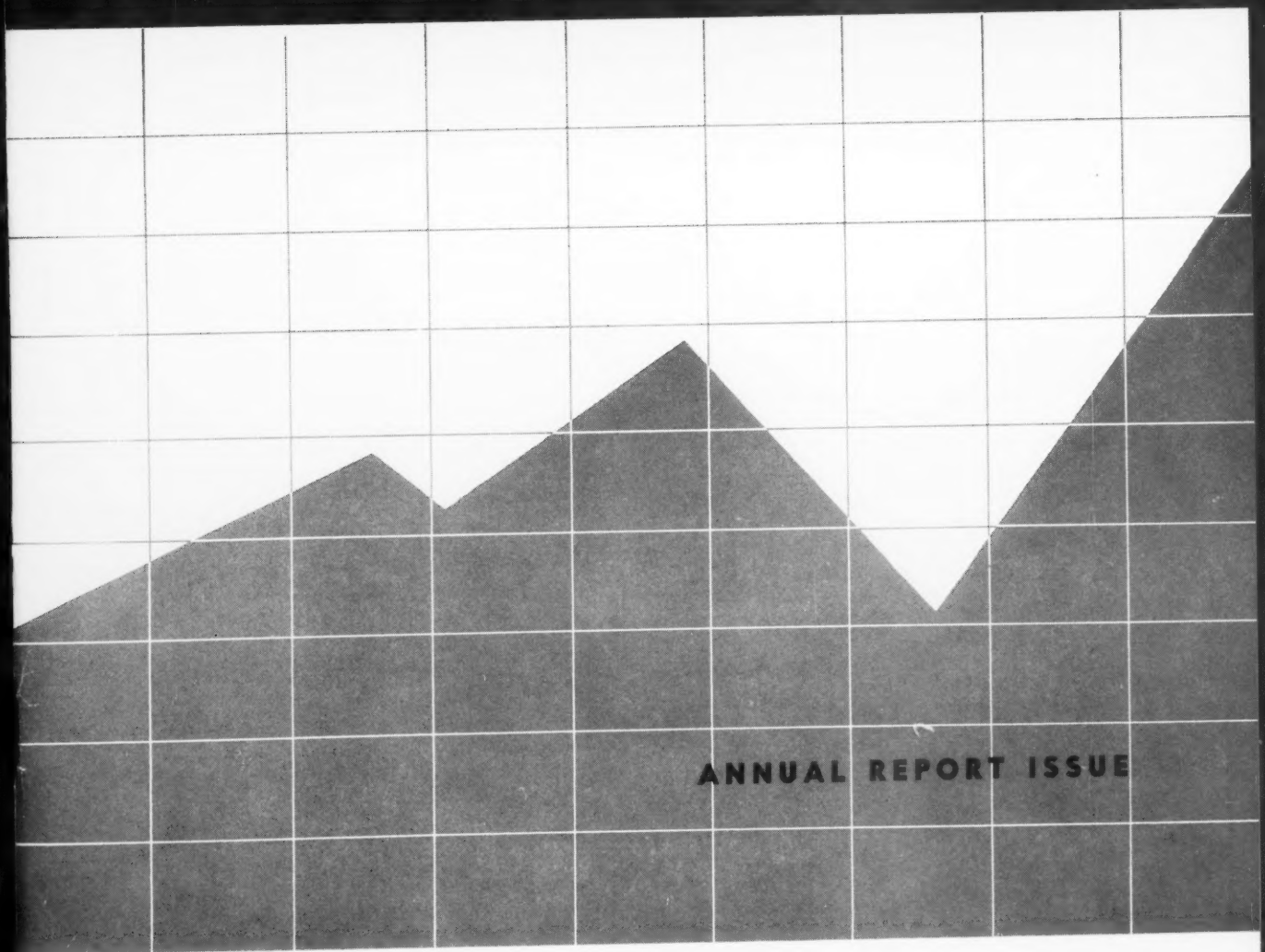
JOURNAL OF THE
American Society OF Safety Engineers



ANNUAL REPORT ISSUE

REPORTS ON COMMITTEES • CHAPTERS • SOCIETY FINANCES

CIS

The International Occupational Safety and Health Information Center

THE NEED

In recent years it had become evident that the need for complete and up-to-date information on every aspect of accident prevention and health protection could not be adequately met except through a world-wide, specialized service. To meet this need the International Occupational Safety and Health Information Center (CIS) was founded in 1959 in Geneva, Switzerland, by the International Labour Office, with the collaboration of the International Social Security Association, the support of the High Authority of the European Coal and Steel Community, the European Economic Community and the World Health Organization, and the active participation of 23 specialized national institutions in countries throughout the world. Now more than 30 Centers are participating in the accident prevention information program.

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Subscribers receive information from the CIS on 3" by 5" cards, which are sent out every three or four weeks in English, French and German editions. They also receive, at no extra charge, the other publications of the Center. Only complete sets of cards are supplied. The interdependence of the subjects and the prohibitive cost of sorting to meet individual requirements make it impossible, at present for the CIS to accept partial subscriptions.

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THE CREED OF THE SAFETY ENGINEER

Perhaps every safety engineer at times has felt the personal need for a tangible expression of his professional attitude. The Creed of the Safety Engineer, to which the members of the American Society of Safety Engineers subscribe, exists to help fill that need.

The Creed is a formally adopted, individual professional pledge. Some Society chapters use it in ceremonies for the initiation of members and the installation of officers.

The Creed was printed annually in the former quarterly *Journal* of the Society. It is now published here for the benefit of new members who may not be familiar with it, and for older members who may wish to pause and reflect upon its words for a moment.

THE CREED

I am a Safety Engineer. In my profession I take deep pride, but without vainglory; to it I owe solemn obligations that I am eager to fulfill.

As a Safety Engineer, I will participate in none but honest enterprise. To him that has engaged my services as employer or client, I will give the utmost of performance and fidelity.

When needed, my skill and knowledge shall be given without reservation for the public good. From special capacity springs the obligation to use it well in the service of humanity, and I accept the challenge that this implies.

Jealous of the high repute of my calling, I will strive to protect the interests and the good name of any Safety Engineer that I know to be deserving; but I will not shrink, should duty dictate, from disclosing the truth regarding anyone that, by unscrupulous act, has shown himself unworthy of the profession.

Since the Age of Stone, human progress has been conditioned by the genius of my professional forbears. By them have been rendered usable to mankind Nature's vast resources of material and energy. By them have been vitalized and turned to practical account the principles of science and the revelations of technology. Except for this heritage of accumulated experience, my efforts would be feeble.

I dedicate myself to the instruction of younger members of my profession in all its arts and traditions. To my Fellows, I pledge, in the same full measure I ask of them, integrity and fair dealing, tolerance and respect, and devotion to the standards and the dignity of our profession; with the consciousness, always, that our special expertness carries with it the obligation to serve humanity with complete sincerity.

READERS Pulse

(Letters for this column are invited from readers on any subject related to safety, or based upon any material printed in THE JOURNAL.*)*

Go-Karts . . .

GENTLEMEN:

At an Executive Committee meeting of the Eastern New York Chapter recently, a letter from one of our members was discussed. It pertained to the problem of "go-karts" which are advertised in some of the national magazines as prizes for children in connection with subscription contests.

While these are motor vehicles in one sense, they cannot be licensed in most states and of course are being operated by children of any age. Because of the high speeds at which they can be operated, we feel that they are a danger not only to the operators but also the general public, since they are often used on the streets and sidewalks.

The Executive Committee felt that this information should be passed on to the national A.S.S.E. office and if you agree that this constitutes a public menace, you would be in a better position to contact the national publications to this effect.

BYRON N. DEWEY
Chairman
Eastern New York Chapter

Abstracts . . .

DEAR SIRS:

In the October, 1961 issue you published Abstracts of various publications including foreign ones. I would like to suggest that in future issues you state whether the foreign articles are available in English, whether they can be obtained in this country and where, how much they cost in American money and similar pertinent information.

Without this information, the Abstracts are of limited value, at least so far as the foreign publications are concerned.

FRANCIS L. OTTO
Washington Chapter

(EDITOR'S NOTE: *We agree with your observations and in an effort to provide greater service to our readers, we are now listing the source of these abstracts. See pages 44-45. For information on translations, price and availability, we can only suggest that you contact the original source, since these conditions vary greatly.)*

Bouquets . . .

DEAR MR. BLACKMAN:

I sure liked the first issue of the *Journal.* You have done an excellent job.

I liked the article by A. I. Snyder on pressure vessels. An article like that helps us sell recommendations to assureds having LPG tanks. The Laws and Regulations feature is also very informative.

How about considering a "Question and Answer" feature to which members can send details of special problems they have in safety. The best solutions sent in by readers could be published in the following issue. Other magazines carry similar columns.

Again, congratulations on the good work you are doing and on the *Journal.*

HERB FINGER
Garland, Texas

GENTLEMEN:

Each of you, the authors and the entire Society can well be proud of the October 1961 first independent issue of the *Journal of the American Society of Safety Engineers.* I believe it contained some of the most intelligent and outstanding papers on the subject of accident prevention that have ever been published anywhere.

W. W. ALLISON
Supervisor, Safety Engineering
Bettis Atomic Power Lab.

The Journal of the
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Editorial Comment

Regulatory Codes—Good or Bad?

REGULATORY SAFETY CODES are frequently subject to criticism or praise—depending upon the frame of reference employed. They are criticized for hampering industry because they require compliance with "useless" technicalities or they are praised because they establish minimum standards with which everyone must comply and thereby promote uniform practices among *all* companies regardless of their size, age or location.

"You can't legislate safety," say the critics. "You *can* legislate safe environments," say the proponents. So the argument goes—and will no doubt continue for many years.

In approaching the subject it becomes immediately apparent that in order to arrive at any agreement, a definition of "safe" and "safety" must be arrived at by all concerned. Webster's unabridged dictionary defines "safe" as being "freed from danger, harm or injury." "Safety" is defined as "the condition of being free of risk or injury."

Are these terms "safe" and "safety" absolute? No, they are relative and must be compared with some known and accepted standard! Such standards are created by the pooling of knowledge and experience together with such factual data as has been developed to support them. Such standards then become yardsticks and by definition "criteria, models or examples."

Whether such standards should be voluntary or mandatory would depend upon several factors.

Is there enough known about the subject so that a practical standard can be established?

Does experience (in this case, accident experience) indicate that actual conditions as they exist are considerably below the standard?

Will the lack of compliance with the standard result in injury or loss of life?

Is it a performance standard as differentiated from a specification standard? (For example, is a railing required to withstand a given load rather than specifying the type and size of materials?)

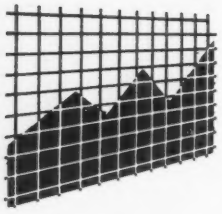
Are the procedures used in the adoption of the standard such that those interested or affected are given an opportunity to participate in the drafting of the standard?

Finally, if it is to be a mandatory standard, what policy and method has been established to administer it?

Each of these questions should be answered only after a complete study of the problem, before a decision is made.

Because our Society has felt that standards of safety are important, its members have in the past, and are presently participating in many standard-making activities. Since many of these standards become the basis for regulatory codes, it is essential that we strive to make them sound and practical and above all, that they accomplish the desired objective.

A. C. Blackman



REPORT from the Managing Director

The Society's activity year 1960-61 was an extremely busy and eventful one. The year witnessed the birth of a new monthly publication. In addition there were several staff changes, many innovations in procedure and record-keeping at the national office, the final drafting of a revised Constitution and By-Laws, the preparation for re-incorporation of the Society in the State of Illinois and a change in the Society's tax status.

Here, in brief review, are some of the highlights of the year:

• STAFF CHANGES—Our former editor, Robert E. Beighley resigned shortly after the Executive Committee meeting on October 16, 1960. Leonard Levine became our new editor as of November 15, 1960. Additional personnel were later added to form the staff of the Society's new publication and two members of the clerical staff were replaced.

• EQUIPMENT—New office equipment authorized in the 1960-61 budget was purchased. The new addressing equipment has been in use since the end of March and is proving its worth.

• ANNUAL REPORTS—A new report was prepared giving detailed information about Award-winning chapters' programs and activities. This report was sent to all chapters. Contest scores were shown and outstanding activities of other chapters were included in the report for the information of all chapters. The January, 1961 issue of *Engineering for Safety* contained the annual report of the Society to the entire membership.

• INCOME TAX STATUS—The Society was granted tax exemption under Section 501(c)(6) of the Internal Revenue Code. This class of tax exemption is similar to that of Chambers of Commerce, Trade Associations and purely professional societies. Under the new tax status it became necessary for the Society to pay Illinois State Unemployment taxes.

• FORMS FOR CHAPTER USE—New forms for reporting dues payments, reclassifications and changes of address were prepared and sent to all chapters for their use. The forms are self-copying and are bound in pads and are designed to be used with window envelopes, with return copies provided for chapter secretaries and treasurers. Word from the chapters indicates that the new forms have helped reduce the work of chapter officers. In addition, two chapters are experimenting with imprinted folders intended to record all pertinent information on each individual member. After some time has elapsed these chapters will be asked to evaluate the effectiveness of these folders.

• DATA SHEET SURVEY—A survey has been made of all chapters who had undertaken to prepare or revise data sheets. The purpose of the survey was to determine the status of these projects and to reconcile chapter records with those in the national headquarters office as well as those in the National Safety Council office.

• ASA SECTIONAL COMMITTEE (A92)—The American Standards Association Sectional Committee (A92)—*Ladder Towers and Rolling Scaffolds,* for which the Society is primary sponsor and provides secretarial services, met in May and again in November. The committee has outlined the scope of the standard, formed sub-committees and drafts are being prepared for consideration of the entire committee.

• NEW PUBLICATION—The Society's new *Journal* has taken much time and energy of the entire staff. Concurrently it was necessary to continue publishing *Engineering for Safety* and to prepare copy for the quarterly *Journal* through August. Letters were mailed to prospective advertisers in the *Journal* in April, a special brochure was developed and printed, and agencies and advertisers had to be called upon as quickly as possible. In view of the change of editors, the publications program was reevaluated in consultation with the Publications Committee and the Society President. A great deal of planning has gone into the new *Journal* and from comments received both from members and nonmembers, it has been well received.

• CONSTITUTION AND BY-LAWS—After the Executive Committee approved the report of this committee in May, 1961, the document was reviewed with the Society's attorney. A statement was prepared to be used for incorporating the Society in Illinois and the New York law was examined to insure that the proper procedure was being followed. The final draft of the revised Constitution and By-Laws was published in *Engineering for Safety* in August, the question was placed on the agenda of the Annual Meeting in October where one amendment was approved, and the Constitution was submitted to the membership on November 15, all in conformance with the requirements of our present Constitution.

• INCORPORATION IN ILLINOIS—At the Executive Committee meeting in January, 1961 in Philadelphia, it was decided to prepare a new charter and incorporate the Society in the State of Illinois, rather than amend the original charter in New York. The reason for this was to restate the aims and purposes of the Society in keeping with the newly-revised Constitution. To dissolve the New York Corporation it was necessary to notify each member of

the Society that this action was to be proposed at the Annual Meeting in October. Each member was sent a proxy card to mail in if he was not planning to be present at the Annual Meeting. The officers of the Society were authorized by a vote of 2573 to 27 to take steps to dissolve the New York Corporation after the Society incorporated in the State of Illinois. This will take place after the adoption of the new Constitution in January, 1962.

• CHAPTER AND REGIONAL MEETINGS—During the year, the Managing Director visited or spoke to 14 chapters and six regional meetings. These meetings were valuable. since chapter officers discuss Society matters in some detail at such meetings.

• STAFF TRAINING — During the year, Leonard Levine and Jerry G. Pfnister attended extension courses applicable to their work. This was a mutual project whereby the Society paid the tuition and the staff members donated their time and passed the course. Similarly, the Managing Director attended a one-week Organization Management Institute at Michigan State University sponsored by the U.S. Chamber of Commerce and the American Society of Association Executives.

• OUTSIDE ACTIVITIES — Your Managing Director spoke at the Governor's Industrial Safety Conference in Oregon. He attended a meeting of a prospective chapter group in Louisiana with Southeast Region Vice President P. W. Logan. In addition he is serving as a member of the Planning Committee of the President's Conference on Occupational Safety scheduled to take place in March, 1962. He is also serving on the Committee on Public Understanding of the Atomic Industrial Forum, has consulted with the U.S. Public Health Service and the U.S. Department of Labor concerning our joint activities as national centers for the C.I.S. program, and has participated locally in the Association Executive's Forum of Chicago and the American Society of Association Executives.

All these activities were possible only because of the interest, effort and help of the many Society members involved. Chapter officers who handle dues records, membership applications as well as other correspondence, the Officers. Committee members and others who served as Tellers and Award Judges, all gave of their time and knowledge. To them the Society owes a vote of thanks.

REPORT from Committees

Twelve Standing Committees, as provided by Article V of the Society's Constitution, were functioning during the 1960-61 activity year. In addition, eight Special Committees, appointed by Society President George L. Gorbell, worked in special areas.

Following are highlights of the reports of the Standing and Special Committees for the 1960-61 year:

STANDING COMMITTEES

■ AWARDS AND HONORS—During the year this committee undertook to clarify the current Chapter Achievement Award program, review the program to improve and simplify procedures so as to encourage chapter participation, and to revise the award program and combine it with the Chapter Annual Report. Four sections of the Chapter Achievement Award manual were revised and minor changes were made in other sections of the manual. In August, 1961 the combined Chapter Annual Report-Achievement Award Report Contest booklet were sent to all chapter general chairmen and secretaries. The booklet includes the addition of a new Improvement Award for the chapter in each region which shows the highest degree of improvement during the year. The booklet also contains complete instructions on contest rules and procedures for the guidance of chapter officers.

■ CHAPTERS—This committee is conducting a survey of local safety engineering organizations which may be eligible for chapter status. When the survey is completed, the committee plans to initiate action to interest these groups in affiliating with the Society. A draft of a manual on "How to Set Up a Chapter" has been prepared and is ready for review by the Executive Committee. The committee approved the proposed change in name of the *Milwaukee* chapter to the *Wisconsin* chapter. Petitions from two groups seeking chapter status were reviewed and approved. These groups, approved at the Executive Committee meeting October 14 in Chicago, are Nutmeg chapter in New Haven, Conn., and Greater Tidewater chapter in Norfolk, Va.

• Robert H. Albisser, chairman, delivers the report of the Off-the-Job Safety Committee.

• Technical Publications Committee Chairman Henry G. Lamb reports to October Executive Committee meeting.

■ COOPERATION WITH ENGINEERING COLLEGES—A refresher course training program for members seeking professional registration has been drafted and a mailing has been planned to all chapters. The committee is also working on a revised senior course in safety engineering for colleges.

■ COOPERATION WITH ENGINEERING SOCIETIES—Conducted a survey of the Society's chapters to determine the degree of participation in local technical societies and engineering councils. The committee found that slightly over half of the chapters located in areas where technical councils exist are active in the affairs of these councils. It concluded that there exists a large area for improvement among the chapters not active in these technical councils. The committee reviewed a proposal to have the Society affiliate with the Engineers' Joint Council and pro-

posed that the Society do *not* consider affiliation at this time.

■ FINANCE—This committee handled the finances of the Society, was responsible for the Society's investments, and arranged, with the Managing Director, for the Society to be granted a tax-exempt status under Section 501 (c) (6) of the Internal Revenue Code.

■ GENERAL PUBLICATIONS—Reviewed and set policy for the Society's new publication, which began in October, 1961. The committee, among other things, examined and reported favorably on a proposal to move up the initial date of the new Journal from January, 1962 to October, 1961; established a time schedule for preparatory steps leading up to the initial issue of the *Journal;* formed an Editorial Board to review technical papers submitted to the *Journal* for publication; recommended that an advertising consultant be retained for the period February-September, 1961; reviewed a proposal from A.M. Best & Company that a joint publication be considered, and declined the offer; conducted a contest to select a name for the new Journal; recommeded that the Society enter into an agreement with the firm of Carter, Pinson and Milner for advertising sales and assistance; and drafted an advertising policy.

■ MEMBERSHIP—Planned a Society-wide membership drive for the period November 15 through December 31, 1961. Reviewed applications and submitted the names of eight members to the Executive Committee with the recommendation that they be elected Fellows of the Society. The committee is also studying the need for revising the application for membership forms.

■ PUBLIC RELATIONS—Worked in cooperation with the headquarters staff in planning a publicity campaign on behalf of the Society's 50th Anniversary. Continuing work on an occupational monograph on "Careers in Accident Prevention." Studying the possibility of establishing a speakers' bureau.

■ RESEARCH—Surveyed the chapters for suggestions on the type of research they wished undertaken. Also developed four subjects, two of which are recommended for consideration as Society-sponsored research projects for the coming year.

■ SAFETY LAWS AND REGULATIONS—Publicized information on revisions of the Walsh-Healey Public Contracts Act. Followed legislation introduced into Congress. Proposed that the scope of the committee be reviewed. Investigated possible sources of information on legislative matters.

■ STANDARDS—Organized a sectional committee for the proposed ASA Standard A92—Ladder Towers and Rolling Scaffolds. Secured Society representatives for all ASA Sectional committees involving safety standards. Presented talk on "How Safety Standards Serve You" to several Society chapters.

■ TECHNICAL PUBLICATIONS—Continued work with Society chapters on National Safety Council data sheets; launched the CIS program of abstracting safety literature; made arrangements with seven technical publications to provide their own abstracts.

■ CONGRESS PROGRAM—arranged 16 A.S.S.E. Subject Sessions for the 1961 National Safety Congress.

SPECIAL COMMITTEES

■ JUNIOR ACHIEVEMENT—Assisted Junior Achievement, Inc., in developing a Safety Manual for use by Junior Achievement companies. The committee is conducting a survey of chapters in a preliminary step to the development of standards for chapters working with Junior Achievement companies. Reviewed the proposal that the Society present an award to the JA Safety Director of the Year. (This proposal was approved and presented to the Executive Committee meeting October 14, 1961 in Chicago, where it was passed.)

■ LONG RANGE PLANNING—Reviewed and considered the work of the Special Committee on Qualification Standards of Safety Engineers; the creation of a Job Information Center; the Long Range Planning activities of other Societies; the question of building or leasing a building for Society use; the feasibility of having sections within the Society for industry specialization; and the possibility of conducting seminars and conferences.

■ OFF-THE-JOB SAFETY—Prepared a procedure guide for chapters in establishing Off-the-Job safety programs. Reported that six chapters have programs under way with other chapters considering the proposal.

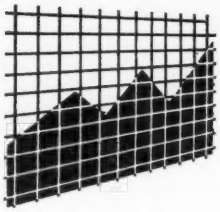
■ MOTOR VEHICLE OPERATION—Conducted a campaign to interest motor vehicle fleet safety engineers in membership in the Society. In this connection, the committee arranged for special presentations at meetings of the Private Truck Council of America in February, 1961; the American Petroleum Institute Fire and Safety Committees in May, 1961; and the American Trucking Association's Council of Safety Supervisors in August, 1961. Committee members have also spoken at other state and local meetings attended by fleet safety engineers.

■ CONSTITUTION AND BY LAWS—Completed the revision of the Society's Constitution and By Laws. The final draft was accepted at the May, 1961 Executive Committee meeting. A petition was secured and the revision was published in the official Society publication, placed on the agenda of the Annual Meeting October 16, 1961, and submitted to the membership in the form of a mail ballot on November 15.

■ QUALIFICATION STANDARDS FOR SAFETY ENGINEERS—Surveyed all state and territory boards of registration to determine which boards register safety engineers under that title; which boards examine in safety engineering; and what the qualifications are for registration as safety engineers. The committee recommended that this study be continued; that the membership and their employers be polled on qualification standards for employment in safety; that the membership be asked for opinions on certification, registration and licensing; that chapters be urged to form committees to study these questions; and that a booklet be prepared on a wide range of actual safety job descriptions.

■ WORKSHOP SEMINARS—Conducted a "pilot" workshop seminar for members of the Niagara Frontier Chapter which produced excellent results. An outline was produced which the committee recommended be printed and distributed to chapters to encourage them to conduct similar workshops on a chapter level.

• President George L. Gorbell, right, checks a point with Charles C. Albrecht, during his report as chairman of the Committee on Junior Achievement.



REPORT on Chapter Activities

The growth and development of the chapters of the American Society of Safety Engineers over the past 37 years represent the sum of the efforts of all its members. Through those efforts, the Society grew from an organization of 11 chapters in 1940 to one of 50 chapters in 1950 and 76 chapters in 1960.

In October, 1924, the Society's first two chapters, Metropolitan and Boston, were formed. These were followed in 1928 by the New Jersey Chapter and in 1931 by the Western Pennsylvania Chapter.

During the 1930's, seven additional chapters were added to the growing organization—Philadelphia and San Francisco (1935); Niagara Frontier (1936); Southwest (1937); Alabama (1938); and Gulf Coast and Greater Kansas City (1939).

The war-time and post-war years of the 1940's saw the number of chapters multiplied many times over. At same time, membership rose from about 2,000 in 1940 to more than 5,000 in 1950.

During the past 10 years the scope of activities in which Society chapters engage has grown larger as their number has increased.

EDUCATION AND TRAINING

The 1960-61 activity year was a particularly active one for A.S.S.E. chapters in the area of education and training. Many chapters acted as co-sponsors for seminars and conferences, while others undertook these programs completely from within the chapter organization.

A three-day Industrial Safety Conference at Southern Illinois University was sponsored by the St. Louis Chapter. The chapter also assisted in the formulation of a course in safety engineering at SIU. The chapter also sponsored a one-day accident prevention course at St. Louis University.

1961 Winners of the Albert D. Caddell Chapter Awards

NATIONAL WINNER
Philadelphia Chapter

REGION WINNERS

Northeast Region
Boston Chapter

East Central Region
Western Pennsylvania Chapter

Southeast Region
Georgia Chapter

Central Region
Wisconsin Chapter

West Central Region
St. Louis Chapter

Southwest Region
Southwest Chapter

Western Region
San Francisco Chapter

Presidential Commendations For Administrative Efficiency

New Orleans Chapter
South Florida Chapter
West Florida Chapter

The Niagara Frontier Chapter sponsored a course in "Development of Effective Safety Programming" which was presented at the New York State School of Industrial and Labor Relations, an Extension Division of Cornell University, and at the State University of New York's College of Education at Buffalo.

A 19-week course at Cogswell Polytechnic College covering all phases of accident prevention was organized by the San Francisco Chapter. The chapter was also responsible for organizing a truck driver training program in its area.

The first credit course in industrial safety ever offered at the University of Omaha was made available through the efforts of the Great Plains Chapter.

The 7th Biennial Safety Conference and Exposition, co-sponsored by the Central New York Chapter, was attended by over 3,500 with 41 exhibitors participating.

In cooperation with Louisiana State University, the New Orleans Chapter sponsored the 8th Annual Short Course in fundamentals of occupational safety. The chapter also held a 12-week seminar at Tulane University on motor fleet safety supervision.

The Philadelphia Chapter prepared a course outline for Drexel Institute of Technology and another on safety and human relations for use by roadway workers at Penn State. The chapter also developed, and chapter members conducted, a safety course at the University of Pennsylvania designed for high school instructors. This course was for students working toward an MA degree. In cooperation with the Philadelphia Chamber of Commerce Safety Council, the chapter conducted a fire prevention school.

COURSE AT RIDER COLLEGE

For the 11th consecutive year, the Penn-Jersey Chapter presented a course in safety management at Rider College.

A two-day Industrial Safety Seminar at the University of Tennessee was sponsored by the Eastern Tennessee Chapter. The chapter planned the program, secured the speakers and completed all other arrangements for the seminar.

Attended by safety engineers, supervisors and personnel directors, the Annual Safety Institute at the Uni-

Please turn page

● Members and guests of the Central New York Chapter are seen at the special American Society of Safety Engineers luncheon held May 3, 1961 at the Seventh Biennial Central New York Safety Conference and Exposition in the Hotel Syracuse, Syracuse, N.Y.

versity of Arkansas, sponsored by the Arkansas Chapter, also met with great success.

The Ark-La-Tex Chapter was sponsor of a driving seminar for high school students and also conducted classes in safety for Shreveport police.

The Alabama Chapter was a sponsor of the 3rd Annual Safety Seminar in Birmingham and arranged a special program on hard hats and eye safety.

In cooperation with the Greater Kansas City area Safety Council, the Greater Kansas City Chapter sponsored the 16th Annual Central States Safety Congress. The meeting was attended by over 1,400 persons.

Several chapters cooperated with colleges and universities in their area during the 1960-61 year in setting up programs in accident prevention.

The Boston Chapter sponsored a one-day seminar at the Massachusetts Institute of Technology and supplied faculty members to the 5th Annual Accident Prevention Institute. With the aid of the University of Hawaii, the Hawaii Chapter set up a non-credit course in safety and fire protection. A two-day training session at the University of Minnesota was sponsored by the Northwest Chapter.

The Lansing Chapter was a sponsor of the annual Central Michigan Safety Conference.

PUBLIC RELATIONS

Chapter public relations activities serve a two-fold purpose. First they keep the general public informed of on-the-job and off-the-job accident prevention information and, second, they make the public aware of the chapter as a source for this information.

The Philadelphia Chapter conducted a continuing public educational campaign emphasizing the need for safety. As part of this activity, the chapter participated in an outdoor safety advertising program. During the 1960-61 year, the Philadelphia chapter took part in 18 radio and television programs concerned with accident prevention. The chapter recorded a half-hour program titled "World in Perspective" during the year. In addition, it was a co-sponsor of National Engineers Week.

The Greater Charlotte Chapter, which is preparing a TV film for presentation, had local chapter activities presented on local television four times during the 1960-61 year. Ten interviews concerning chapter activities were broadcast over local radio stations.

During the course of the 1960-61 chapter activity year, the New Orleans Chapter supplied 20 speakers to outside organizations. A collection of safety books was presented to the New Orleans Public Library in the name of the chapter.

Through the efforts of its members, the Hawaii Chapter was able to secure coverage of many of its activities over local radio, television, magazines and newspapers.

Spot TV announcements of chapter meetings and meeting notices in local newspapers were obtained by the Los Angeles Chapter. The chapter also formed a committee to help discourage the illustration or other presentation of unsafe practices in advertising.

Public relations activities of the Milwaukee Chapter (now the Wisconsin chapter) during the 1960-61 year including the conducting of a

● Leroy A. Faulkner of the Boston Chapter discusses material handling problems with mechanical engineering students during the Chapter's "Operation Cooperation" program with the Massachusetts Institute of Technology and Northeastern University.

● The New Orleans Chapter was an exhibitor at the Southern Pine Association Machinery Exhibition held April 7-9 in New Orleans. Cooperating with the Chapter was the Delta Safety Society in sponsoring the exhibit which attracted much attention.

Junior Achievement training program. The chapter received local publicity when it honored the local JA "Safety Director of the Year" at one of its meetings.

Members of the St. Louis Chapter appeared on a local television program featuring rescue breathing methods and boat and water safety. The program was later released to the network and shown over local outlets in several major cities. Nominations for traffic courtesy certificates were also supplied by the St. Louis Chapter. Chapter members served as judges in Golden Shoe Club applications.

40th ANNUAL CONFERENCE

The Boston Chapter received publicity and recognition when it supplied speakers for the 40th Annual Massachusetts Safety Conference.

Election of Niagara Frontier Chapter officers, Life Membership Certificate presentations, special safety projects and the chapter's safety educational program all received publicity in local newspapers. The chapter participated in the Western New York Safety Conference with 15 of the 21 conference directors being chapter members. In addition, the Niagara Frontier Chapter has a booth at the Industrial and Engineering Fair.

The San Francisco Chapter received recognition for providing speakers at various technical meetings in the area.

The Fort Worth Chapter sponsored a fleet safety contest in Fort Worth.

In cooperation with a local radio station, the Georgia Chapter broadcast spot announcements over holiday periods emphasizing the need for caution on the highways. The chapter also increased its influence as a medium for transmitting safety information through joint meetings with the Georgia Engineering Society.

The safety exhibit at the High Point Health and Safety Exhibit was sponsored by the North Carolina Chapter.

During the year representation in the Texas Safety Association was established by the Southwest Chapter which was also one of the cooperating organizations in the 22nd Annual Texas Safety Conference.

● Henry White, left, 1960-61 general chairman of the New Orleans Chapter, presents one of the first place awards to William C. Cunningham of the Campbell Express Company in the Louisiana Safe Driving Truck Road-eo competition held last May.

TECHNICAL PAPERS—DATA SHEETS

Many chapters during the year were engaged in the development of data sheets while papers written by chapter members were published in the official publication of the American Society of Safety Engineers or in other technical and engineering journals.

Among the chapters having data sheets accepted by the National Safety Council was the Georgia Chapter which completed work on "Mobile High Pressuring Aircraft Systems." P. W. Logan of the chapter wrote three papers including "You Can't Wait for Them to Learn the Hard Way," "Waste Prevention for Profit," and "Safety Masquerade Ball." The Georgia Chapter also revised four other data sheets.

A complete revision of the data sheet, "Chlorine," was made by the Western Pennsylvania Chapter. The chapter also reviewed the "Escalators" data sheet. "Safe Use of Rupture Discs" by Western Pennsylvania Chapter member William W. Allison was printed in the official Society *Journal*.

PHOTOGRAPHY DATA SHEET

"Photography for the Industrial Safety Man" by Donald A. Gemming of the St. Louis Chapter was published as a data sheet by the National Safety Council. St. Louis chapter members James D. Hoag and Elmer Steiger also prepared a paper titled "It's No Good Without Know-How."

Philadelphia Chapter members were responsible for the preparation of 11 technical papers during the 1960-61 year. The chapter also reviewed the "Escalators" and "Metal Squaring Shears" data sheets.

Boston Chapter's John W. Gurry prepared a paper for publication in the Society's *Journal* titled "A Safety Job or Job Safety." Work on the data

● The combined Philadelphia-Delaware County-Penn-Jersey exhibit at the 1961 Regional Safety and Fire Conference and Exhibition in Philadelphia was a center of attraction for many of the 5,000 delegates who attended. The Albert D. Caddell Award held jointly by the Philadelphia Chapter (with New Orleans) last year is shown in the lower left hand corner.

sheet "Bale Breakers and Openers" was done by the Boston Chapter.

A data sheet on "Epoxy Resins" was developed by the Milwaukee Chapter. The chapter reviewed data sheets on "tilt-up concrete slab construction" and "lift slab concrete construction." Chapter member Michael F. Biancardi prepared a paper on "Family Recreation and Safety" and J. A. Churchill wrote an article on "Materials Handling."

"Magnesium Thorium Alloys" data sheet was completed by the Los Angeles Chapter.

COMMUNITY SAFETY

In many communities, the chapters of the American Society of Safety Engineers hold a unique position as virtually the only agency devoted to the cause of accident prevention. In others, the chapter actively cooperates with local safety organizations, schools, civic groups and others in community safety programs.

The Colorado Chapter was represented on 11 local civic organizations including the Civil Air Patrol, Central States Safety Congress, and Metropolitan Safety Council.

The Northwest and Fort Worth Chapters made inspections for safety in Junior Achievement facilities and made recommendations for improvements.

The Greater Chicago Chapter aided in the organization of the Joint Council of Traffic Safety Committees.

An offer to survey local schools was made by the Delaware County Chapter. The chapter reported that the response to the chapter offer to make a safety check was very encouraging and plans to continue and expand the program are being formulated. Chapter members also spoke to local high school student groups on various aspects of safety during the year.

INDUSTRIAL HEALTH CONFERENCE

In addition to its co-sponsorship of the 4th Annual Western Industrial Health Conference, the San Francisco Chapter set up the first first-aid contest held by Boy Scouts in the area.

Members of the St. Louis Chapter volunteered to inspect local area Boy Scout and Girl Scout camps for safety, fire protection, health and sanitation. The chapter also assisted in auto safety checks.

A program specifically covering community safety was planned by the Boston Chapter. The chapter also provided schools and libraries with a recent list of books and films on accident prevention.

● Two members of the St. Louis Chapter are shown with an inspection team which checked the Boy Scout "Lion's Den" camp for safety. This was one of the many activities engaged in by St. Louis Chapter members. The two are John M. Deegan, third from right, and Melvin G. Bullock, second from right.

Free tornado safety inspection of schools was made by members of the Greater Kansas City Chapter. In cooperation with the Veterans of Safety, the chapter set up a health and safety program for Boy Scouts and inspected local Boy Scout camps.

A program on traffic safety, sponsored by the Mohawk Valley Chapter, was attended by more than 350. Because the principal costs were assumed by the New York Telephone Company, the program was both an effective community service and inexpensive to the chapter.

SPONSORS ESSAY CONTEST

An essay contest at Georgia Tech was sponsored by the Georgia Chapter. The winner received a $25.00 library of safety books. The chapter presented awards to companies with the lowest accident frequency rate in each of 44 divisions of 17 major classifications. In addition, the Georgia Chapter joined the Associated Industries of Georgia in sponsorship of the 8th Annual Accident Prevention Contest.

A local high school safety program and bicycle check was established by the McKinley Chapter.

Members of the Eastern New York Chapter acted as judges in the local area's school children safety contest.

In addition to its continuing cooperation with the local chamber of commerce, the Philadelphia Chapter co-sponsored, with the local safety council, an inter-plant safety achievement contest for business and industry. The chapter also cooperated with the Philadelphia Safety Council in conducting a two-day regional safety and fire conference.

In recognition of its outstanding work in school safety, the Niagara Frontier Chapter presented an award to the Niagara Falls Board of Education.

CHAPTER MEETINGS

Chapter meeting programs during the 1960-61 year developed and expanded activities in which chapters engage.

In the course of the year, the Ark-La-Tex Chapter originated the Cecil Hightower Memorial Safety Award to be given each year to the company, group or individual within the chapter area making the greatest contribution to safety.

The North Florida Chapter developed a speakers bureau for the purpose of providing chapter speakers to fill local requests.

Greater Kansas City Chapter members attended meetings of the American Society of Mechanical Engineers and the American Institute of Electrical Engineers and offered chapter cooperation on safety matters.

Oklahoma City Chapter members, through the chapter's speakers bureau, assisted fourth year medical students at the Oklahoma School of Medicine in on-the-job preventive medicine.

Other engineering societies were contacted by the McKinley Chapter to discuss interchanging speakers between organizations.

The Northwest Chapter developed a unique method of bringing its chapter roster up to date. Chapter members were divided into telephone teams to check and verify roster information and it was found that this method of contacting chapter members was both expeditious and efficient.

1961-62 Executive Committee

NATIONAL OFFICERS

President	JOHN V. GRIMALDI
First Vice President	MICHAEL F. BIANCARDI
Second Vice President	EDWIN B. LOCKE
Treasurer	FRANK E. LADERER
Secretary	A. C. BLACKMAN

MEMBERS-AT-LARGE

THOMAS J. BERK — SAMUEL MC KAY
HOLLY P. BRADLEY — JOHN U. PARKER
JOHN G. DALTON — CLYDE C. RUDDICK
LEE B. JOHNSON — CLYDE F. SCHLUETER
W. EUGENE STUFFING

REGIONAL VICE PRESIDENTS

Northeast Region	MERRILL C. M. POLLARD
Eastern Region	ARTHUR H. CHRISTIAN
East Central Region	JAMES F. VAN NAMEE
Southeast Region	P. W. LOGAN
Central Region	CLYDE F. SCHLUETER
West Central Region	ROBERT J. DOUGHERTY
Southwest Region	D. MARK JOHNSON
Western Region	CLINTON W. DREYER

PAST PRESIDENTS

George L. Gorbell
John F. Jones
Donald G. Vaughan

STANDING COMMITTEES*

Awards and Honors	ROY G. BENSON
Colleges and Societies	W. EUGENE STUFFING
Finance	FRANK E. LADERER
Publications	GEORGE W. HARPER
Membership Promotion and Public Relations	C. RUSSELL DE REAMER
Program Planning	E. N. DECK
Research	THOMAS H. ROCKWELL
Standards, Laws and Regulations	ROBERT D. GIDEL

**Special Committee chairman to be named by President John V. Grimaldi.*

NATIONAL REPRESENTATIVES

ALABAMA • J. A. Downey, Jr.
ARIZONA • Fred U. Rutz
ARKANSAS • Lowell L. White
ARK-LA-TEX • Harry M. Williams
BOSTON • Clinton L. Pendleton
CENTRAL FLORIDA • J. B. Sullivan
CENTRAL ILLINOIS • J. A. DePew
CENTRAL INDIANA • D. Stephenson
CENTRAL NEW YORK • James H. Norton
CENTRAL OHIO • F. D. Peterseim
CHATTANOOGA AREA • Sam E. Sharp
COLONIAL VIRGINIA • Joseph E. Nichols
COLORADO CHAPTER • Earl E. Goldsworth
CONNECTICUT VALLEY • E. H. Wessells, Jr.
CORPUS CHRISTI • Don H. Loftin
DELAWARE COUNTY • William E. Carroll
EAST TENNESSEE • E. S. Whitmire
EASTERN NEW YORK • A. L. Bell
FORT WORTH • Hugh O. Lochridge
GENESEE VALLEY • Leo A. Miller
GEORGIA CHAPTER • Robert A. Wendell
GREAT PLAINS • M. M. Mehring
GREATER BATON ROUGE • Carroll A. Hebert
GREATER CHARLOTTE • Glen G. Fleming
GREATER CHICAGO • Robert E. Whiteside
GREATER DETROIT • K. F. Langhorst
GREATER KANSAS CITY • Charles R. Zeskey
GREATER TIDEWATER • Oliver E. Holmers
GULF COAST • Carlton S. Tibbitt
HAWAII • Richard M. Yawata
LANSING • Willis L. Wiggins
LOS ANGELES • Edwin S. Wyncoop
LOUISVILLE • Joseph E. Sparks, Jr.
McKINLEY • James H. Reed
MEMPHIS • James L. Dean
METROPOLITAN • Gordon L. Bowen
MIDDLE TENNESSEE • J. E. Claxton
MISSISSIPPI •
MOBILE • E. Lynn Keefer
MOHAWK VALLEY • E. W. Ewig
NEW JERSEY • Albert L. Anthony
NEW MEXICO • Roy Reider
NEW ORLEANS • Henry R. Rauber
NIAGARA FRONTIER • Merrill C. M. Pollard
NORTH CAROLINA • Luther W. Ellenwood
NORTH FLORIDA • C. E. Hooks, Jr.
NORTHERN OHIO • Otto C. Haier
NORTHWEST • Victor G. Hendries
OKLAHOMA CITY • G. Chantre
NUTMEG •
PANHANDLE • Waymon O. Herd
PENN-JERSEY • Edward S. Moffett
PERMIAN BASIN •
PHILADELPHIA • Samuel McKay, Jr.
PORTLAND • Dan Adair
PUGET SOUND • H. R. Kienle, Sr.
QUEBEC • Walter E. Montgomery
RHODE ISLAND • F. W. Marcaccio
SABINE-NECHES • Jules V. Bech
SACRAMENTO VALLEY • Robert F. Shelden
ST. LOUIS • Virgil L. Womeldorff
SAN FRANCISCO • Karl Schulze
SOUTH CAROLINA • C. B. Simmons
SOUTH FLORIDA • LeMar H. Stein
SOUTH TEXAS •
SOUTHWEST • Walter M. Measure
SOUTHWESTERN OHIO • Q. R. Ray
SPOKANE • Richard V. Milligan
TULSA • Robert L. Potter
UTAH • George E. England
WASHINGTON • Earl Allgaier
WEST FLORIDA • J. W. Thompson
WEST VIRGINIA • C. H. Dick
WESTERN MICHIGAN • Dennis L. VanSloten
WESTERN PENNSYLVANIA • Edward B. Braden
WICHITA • Rylen M. Rudy
WISCONSIN • James G. Reilly
WORCESTER COUNTY • Mark G. Thatcher

SOCIETY FINANCES

The Society's books were again audited by the firm of Haskins and Sells, Certified Public Accountants, Chicago, in October, 1961. Their statement and the audit figures show that the Society spent $5,273 less than budgeted while income exceeded the estimate by a total of $4,144.4 The Fund Balance rose from $68,921.78 to $70,727.14.

ACCOUNTANTS' OPINION

To the Executive Committee of American Society of Safety Engineers:

We have examined the summary of funds balances and changes therein for the year ended September 30, 1961 of American Society of Safety Engineers. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying summary of funds balances and changes therein presents fairly the financial position of American Society of Safety Engineers at September 30, 1961 and the results of its operations for the year ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Haskins & Sells

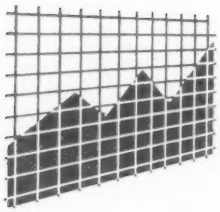
October 11, 1961

AMERICAN SOCIETY OF SAFETY ENGINEERS

Summary of Funds Balances and Changes Therein
For the Years Ended September 30, 1961 and 1960

	— Year Ended September 30 —		
	— 1961 —		1960
	BUDGET	ACTUAL	ACTUAL
GENERAL FUND			
FUND BALANCE AT BEGINNING OF YEAR		$ 68,921.78	$ 58,082.14
ADDITIONS:			
Membership dues	$100,000	89,494.50	85,478.00
Initiation fees		12,499.39	13,140.65
Refund of dues and fees		(363.00)	(1,059.50)
Grant in aid from the National Safety Council	6,250	7,083.34	12,916.66
Pins and certificates	3,300	1,000.15	1,156.50
Interest income		2,313.05	7,925.87
Mailing list sales		1,078.00	
Miscellaneous—net		588.58	555.81
Total additions	$109,550	113,694.01	120,113.99
Total		182,615.79	178,196.13
DEDUCTIONS:			
Salaries	$ 59,950	58,155.14	60,705.45
Addressograph	360	855.40	1,229.83
Publications:			
Printing—Newsletter and Journal	15,400	10,242.87	14,122.18
Advertising and Promotion—New Journal	6,757	5,296.14	
Pins and certificates	1,000	895.17	629.14
Office maintenance	8,124	8,616.79	8,217.60
Employee benefits	4,275	5,878.66	2,637.79
Postage and express	3,500	3,709.58	3,677.36
Stationery and supplies	4,050	4,221.96	2,975.85
Oustide services	1,200	1,308.68	5,138.40
Travel	4,500	3,392.19	3,699.93
Non-recurring expenses	7,045	9,383.77	5,628.89
Miscellaneous	1,000	892.30	611.93
Total deductions	$117,161	112,848.65	109.274.35
FUND BALANCE AT END OF YEAR		69,767.14	68,921.78
RESEARCH FUND			
FUND BALANCE AT BEGINNING OF YEAR		1,710.00	2,500.00
DEDUCTIONS—Expenditures	$ 1,710	750.00	790.00
FUND BALANCE AT END OF YEAR		960.00	1,710.00
TOTAL		$ 70,727.14	$ 70,631.78
REPRESENTED BY:			
Cash:			
Checking account		$ 11,940.18	$ 15,393.54
Savings account		15,000.00	
United States Government securities—at cost:			
Treasury notes, 4⅞%, due 1963 (market value in 1961, $41,175)		40,000.00	40,000.00
Treasury bills			11,876.28
Canadian Government bonds, 3% due 1966—at cost in Canadian funds (market value in 1961, $3,094		3,361.96	3,361.96
Airline travel deposit		425.00	
TOTAL		$ 70,727.14	$ 70,631.78

Brackets ( ) denote red figure.



REPORT . . . 1961-62 BUDGET

THE BUDGET adopted by the Executive Committee on October 14, 1961 for the Fiscal Year 1961-62 is different in several respects from prior budgets.

The estimated expenses for the year as well as income, are the highest in the Society's history, expenses being estimated at $135,320 and income estimated at $136,456.

Expenses have been separated into two major categories—the first covering general administrative expenses, and those that are directly ascribable to publications.

Estimated income from dues and fees has been set at the highest level so far, since the Finance Committee is relying greatly upon the Membership Drive being undertaken by the various chapters to produce approximately 750 new members during the period.

Income from advertising has been estimated at approximately $29,100 for the year, which represents approximately 180 pages of advertising for the 12 issues of our magazine.

Every effort was made to keep routine expenditures to a minimum for the coming year, recognizing that much depends upon the success of our advertising sales efforts to achieve a balanced budget. A minimum amount of equipment is to be purchased during the year and travel expenses have been reduced as well. Funds were provided, however, to complete the research project which was authorized in 1960, and also for expenses for some of the national committees.

Non-recurring expenses include such costs which occur only once during a fiscal year such as Congress Expenses, cost of awards, exhibit space, the fee for our annual audit, legal fees and casualty insurance premiums.

The income from advertising in our publication has been estimated by taking the estimated gross income and subtracting from that the percentage being paid to CPM Publications who are acting as business managers of our publication.

They had been made responsible for the sales, production, and art direction work for the *Journal*, for which they received a specific portion of the advertising revenue. Therefore the figure shown as income is the net after deducting these expenses. If our advertising income exceeds the expected amount, there will probably be more pages in the *Journal* which will require a larger printing expense, but not in proportion to the increase in the advertising revenue.

The net worth of the Society at the beginning of the fiscal year 1961-62 as is shown in the figures by the auditors, Haskins & Sells, is about the same as it was a year ago and it is hoped that at the end of the current year, it will show an increase.

AMERICAN SOCIETY OF SAFETY ENGINEERS

Report of Expected Income and Expense For Fiscal Year October 1, 1961-September 30, 1962

(as approved by the Executive Committee October 14, 1961)

ESTIMATED EXPENSES

GENERAL ADMINISTRATIVE

Office maintenance	$ 9,390.
Employe benefits	6,305.
Salaries (other than publications)	45,260.
Certificates and pins	1,000.
Postage and express	4,575.
Travel	3,500.
Stationery and supplies	3,775.
Outside services	1,400.
Non-recurring expense	3,685.
Equipment	2,250.
Miscellaneous	1,000.
Research fund	960.
Special expenses for committees	500.
	$ 83,600.

PUBLICATIONS

Salaries	$ 19,120.
Free lance artwork	1,200.
Advertising promotion	2,100.
Printing and engravings	28,800.
Contingencies	500.
	$ 51,720.
Total estimated expenses	$135,320.

ESTIMATED INCOME

New memberships (750)	$ 13,500.
Membership dues (6,000)	90,000.
Sales of pins and certificates	1,300.
Interest on investments	2,556.
Net income from advertising and subscriptions	29,100.
Total estimated income	$136,456.

Congress Pictures 1961

● Members of the Western Pennsylvania Chapter are shown at the Annual Awards Luncheon being presented with the East Central Region Award for 1960-61. In the foreground are, left to right, George R. Orth, chapter general chairman, receiving the plaque from Past President George L. Gorbell. In the rear, left to right, Lowell H. Johnson, Raymond F. Willett, Earl E. Stephan, James F. Van Namee (newly-elected East Central Region Vice President), Frank H. Labiaux, Edward B. Braden, Edwin W. Engerer, H. F. Herr, Richard T. Williams and former East Central Region Vice President Myron L. Miller.

● St. Louis Chapter members beam as they receive the West Central Region Award for Chapter Achievement. In the front row, left to right, are Vernon J. Heckman, chapter general chairman, Carl Shinsky, receiving the award from President George L. Gorbell, and Roman F. Diekemper. In the center row are, left to right, Melvin G. Bullock, Virgil L. Womeldorff, James D. Hoag, E. J. Green and Warren C. Hargreaves. Standing at the rear are Ottis L. Daily, William H. Crawford, Jr., Edward G. Volz and Lyndall Grosch.

● West Florida Chapter members are shown with Society President Gorbell receiving the Presidential Commendation for Administrative Efficiency. In the picture are, left to right, Wayne C. Christensen, chapter secretary-treasurer, President Gorbell, Floyd W. Watson, and Frank E. McCollom.

● Philadelphia Chapter members "take five" during Executive Committee meeting October 14 in Chicago. Left to right, they are Samuel McKay, Jr., Chapter representative; Arthur H. Christian, Eastern Region Vice President, and George W. Truman, Chapter general chairman.

● Outgoing President Gorbell delivers his report to the Society's Annual Meeting Monday, October 16.

● Wisconsin Chapter members accept Central Region Chapter Award. Left to right, they are Donald P. Zwirlein; Robert F. Schoof, former Chapter secretary; President George L. Gorbell; new First Vice President Michael F. Biancardi; and Central Region Vice President Clyde F. Schlueter.

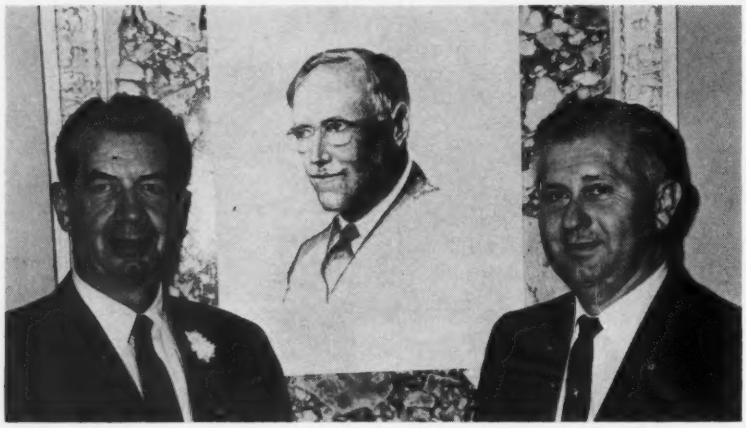
● San Francisco Chapter members Clay Calkins, left, and Clinton W. Dreyer, center, accept the Western Region Award on behalf of their chapter.

● Past President Donald G. Vaughan, left; Carlton S. Tibbitt, Gulf Coast representative, center; and newly-elected East Central Vice President James F. Van Namee, exchange views during a brief pause in the deliberations at the Executive Committee meeting.

● John W. Gurry, left, accepts the Northeast Region Chapter Achievement Award for the Coston Chapter, from President Gorbell.

● The Society's Annual Meeting held Monday, October 16 in the Conrad Hilton Hotel, was extremely well attended this year. This picture shows part of the group present.

● Incoming President John V. Grimaldi addresses the Society's Annual Meeting.



● At the annual Veterans of Safety Banquet held in Chicago on Monday, October 16, during Congress Week, Incoming President Gordon P. St. Clair, left, and Outgoing President Quincy V. Tuma pose with a charcoal sketch of W. H. Cameron who was honored at the banquet. Mr. Cameron, managing director of the National Safety Council from 1913 to 1942, is now retired. The sketch was done by William L. Moore, son of Robert L. Moore, member of the Chicago Chapter, A.S.S.E.

● Paul Witt, Southwest Chapter, left, accepts the Southwest Region Award for his chapter.

● Quincy V. Tuma, Veterans of Safety President, left, congratulates author William E. Tarrants on his winning first prize in the Technical Paper Award program.

● A view of the Society Exhibit at the Congress. National Staff members Marie C. Daniels, left, and Lois B. Dove, seated, chat with Harry H. Verdier, Philadelphia Chapter, as others crowd about the exhibit area.

● R. A. Wendell, Georgia Chapter representative, receives his Chapter's Award for the Southeast Region.

A.S.S.E. JOURNAL • DECEMBER, 1961
TECHNICAL SECTION
VOLUME VI NUMBER 6

A Systems Approach to Maximizing Safety Effectiveness

by THOMAS H. ROCKWELL

One of the popular pastimes of accident preventionists is the never ending argument regarding the best approach to optimal safety effectiveness—the engineering or the management emphasis. Unfortunately, the implication is often presented that background, philosophy or viewpoint is the prime factor in the success of an accident prevention program.

Thomas H. Rockwell, Ph.D., is associate professor of industrial engineering and director of the safety research laboratory at Ohio State University. This paper, his second published in the **Journal**, was second-place winner in the 1960-61 Technical Paper Awards.

The question of the *best* approach cannot be generalized—no more than the *best* way to sell merchandise. It is a function of plant size, type of operation, staff organization, individual capabilities, type of workers, etc.

In addition to wasting our energies on this "straw man" of "best way" it focuses attention on means rather than ends. Moreover, and apparently least appreciated by advocates of this argument, is the fact that individual positions on this matter stem from one's educational background and current experience.

It is difficult for a person to abandon ideas born of personal involvement. One might just as well pose the argument, What is the most effective religion?

What I am suggesting then is that this prosaic issue is argued more from emotion than from reason and indeed it is questionable whether a rational

compromise exists to answer it unequivocally. Could it be that the apparent lack of progress in safety results from an overly narrow concept of what constitutes accident prevention?

Tunnel vision, perspective-wise, can often lead to an emotional, individualistic fire fighting, post mortem approach to safety. Perhaps what is needed now is a broader *systems* view of accident prevention and the concern with the *macroscopic* rather than microscopic aspects of safety and health.

In effect, this paper will attempt to present a conceptualization of accident prevention which advocates a much broader view of the safety problem. The assumptions behind this conceptualization may appear to be heretical to the time-honored view of accident prevention held by safety engineers. But a little heresy is needed now and then to open our minds to new ideas.

SYSTEMS APPROACH NOT NEW

The systems approach is certainly not new in science or engineering but it has received tremendous emphasis of late as noted by the increasing interest in operations research, (O.R.) systems analysis and systems engineering. The key issue here is whether we in accident prevention can learn from these activities, expand our perspectives, make use of new analytical tools and new approaches to system performance maximisation.

In the past twenty years operations researchers have shown unusual success in synthesizing and analyzing on-going operations from a "wholeistic"* point of view. By utilizing both conceptual and predictive models, operations researchers have been able to identify, specify, and evaluate those factors which affect system (operational) performance.

In accident prevention it is proposed that such an approach might provide us with a fresh look at old problems and some useful by-products. This is not to say that O.R. has been successfully demonstrated in the field of accident prevention. The approach expressed herein is an idealized one and needs clarification and application.

CONTINUE PRESENT EFFORTS

Nor is this to suggest that a systems approach should replace our present efforts in combating accidents. Systems effectiveness depends upon the performance of the components. The major premise presented herein is that we can improve component performance by integrating component functions into a systems context.

Embarking on a systems concept of accident prevention requires several assumptions about the nature of accident and health control. These assumptions or constraints are initially required to build the foundation—they may well be relaxed after the systems structure has been completed.

Some of these assumptions which may appear to be sacrilegious are as follows:

- Elimination of all accidents is an impossible goal regardless of the degree of emphasis. What is really required of the accident prevention system is the minimization of the losses associated with unsafe behavior and unsafe conditions.

- To err is human. As long as human behavior plays an important role in accident causation, we must admit to the fact that workers will engage in unsafe acts. Murphy's law is demonstrated daily, namely "if there is a way to do something incorrectly someone will find it." Recent research at Ohio State University indicates that workers may be engaged in unsafe behavior, a sizeable percentage of the time (5-20%).

- Fire-fighting or the emphasis of accident prevention efforts on the basis of isolated accidents is an extravagant waste of our resources. This does not preclude the obvious attention to unsafe conditions and behavior which have lead directly to accidents in the past. However, emotional or sentimental considerations arising from unique accidents should not dictate accident prevention programs.

- The resources available to combat accidents, namely time and dollars are not unlimited. This is no surprise to the practicing accident preventionist and hardly a restrictive assumption.

- The true basis for accident prevention performance is *systems performance* and this system performance must include consideration of the production systems performance. One of the serious problems arising from the neglect of the system approach is suboptimization, a term employed by operations researchers which in essence means "the maximization of component performance at the expense of system performance." In safety, for example, we could cut dispensary costs by allowing self-treatment of minor first aid cases by the employees. This could easily lead to increased total losses when minor accidents lead to major consequences through infection.

- The primary emphasis in accident prevention must be directed towards modifying human behavior or at least attempting to control it. This is consistent with the historical development of accident prevention. This does not suggest that unsafe conditions are not important in accident causation. The greatest gain safety-wise today, however, appears to be in the modification of worker behavior.

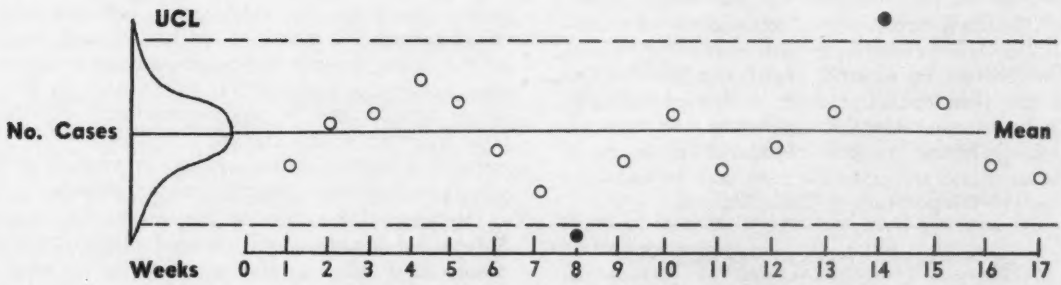
*A term used in *Introduction To Operations Research*, by Churchman, Ackoff, and Arnoff, J. Wiley, 1957.

STATISTICAL QUALITY CONTROL CHART APPLICATIONS TO SAFETY PERFORMANCE

Assumptions: Measure is statistically stable. Fluctuations beyond chance causes can be attributed to assigned causes.

Given: Weekly First Aid frequency, Mean Frequency = 20

Except a point to fall out of control limits by chance five times in a hundred if mean value remains constant



Advantage: Chart indicates times when the data are out of control, e.g., week 8 may be traced to special inspection week 7. Week 14 may be traced to production speed up. Provides a running picture of safety performance.

- Since both the production systems and accident prevention system derive their authority and responsibility from top management, performance measurement including both system outputs will have the greatest appeal to top management.

- Although the systems approach does not neglect the individual worker it places emphasis on aggregate performance. Most research in accident prone theory suggests the payoff (even if we could identify such workers) is hardly worth the effort since the accident repeater contributes a small part to the total accident picture.

- Accidents are essentially probabilistic in occurrence and in severity particularly if one takes a systems viewpoint. Hence, analysis must be based on a sound foundation of probability theory and statistics.

Before considering accident prevention in a systems context it would be well to define and describe the characteristics of a system. A system is defined as: A set of components (man or machine or both) which has certain functions and acts and interacts, one in relation to another to perform some task(s) in a particular environment(s).

A system has first of all a prescribed function or mission. To accomplish this function the system makes use of men and machines arranged in the organization of specific operations. The output of these organized operations is a measure of system effectiveness. The control of these operations is a prime characteristic of any system.

A typical form of control involves a feedback mechanism which translates actual performance into a signal for comparison with desired performance and continuously adjusts the system to meet desired goals.

Control exists at various levels within the system and may consist of different types. For example, in reporting to top management, lower management will filter out certain details which are not vital to top management decisions. The degree of control also varies with the operation involved and the gain to be derived from such control sensitivity.

Other features of a system include: *

- Protection of the critical function. The system has in its design special protection of those functions vital to the life of the system.

- Ultrastability—to prevent collapse of the system it is designed in such a way that it is highly stable under changing environmental conditions.

- Redundancy—the system contains multiple channels of operation so that failure in one channel won't nullify system function.

*From Flagle, Huggins and Roy: *Operations Research and Systems Engineering*, John Hopkins, 1960.

- Reliability—A prime feature of a well defined system is its high degree of reliability, ie, repeatibility of performance under given environmental conditions.

Using the human body as an example we see the epitome of system design. The system function is life itself and to accomplish it hundreds of vital components are organized to meet this function.

Feedback controls exist at various levels in the system. Temperature is a good example. With variations in environmental temperature, capillary blood vessels contract or expand, regulating the flow of blood, the heat exchange fluid, to the extremities. The body samples blood temperature and through the hypothalamus controls capillary action, body evaporation and shiver as the case may be to maintain a given temperature in the brain.

MEASURES OF EFFECTIVENESS

Although there are several measures of system effectiveness one which is often used in the metabolic rate which measures the efficiency with which the body converts chemical (food) energy into work.

The critical function of the body is the brain which depends, for example, upon other subsystems namely respiratory and circulatory systems. Body ultrastability, for example, is enhanced by excessive lung capacity and the wide ranges of temperature control etc.

The body has redundant features designed to provide reliable performance under severe conditions. Kidneys, lungs, nerve pathways are found to possess excess capacity and duplication so that the loss of one of them will not mean the failure of the system.

While we can't hope to achieve the simple yet complex design of the human system we can perhaps see how accident prevention can be viewed in a system or at least a subsystem context.

HAS PRESCRIBED FUNCTION

This system would have a prescribed function namely to reduce the losses associated with unsafe behavior, unsafe conditions and unhealthy environments. The measure of system effectiveness involves more than accidents which are not the only manifestations of unsafe behavior and unsafe conditions. Extreme environments, eg, noise, temperature, lighting can lead to indirect production losses, poor quality, decreased output, absenteeism, turnover, and so forth.

The system's effectiveness is predicated upon the performance of the production system. Analogies to our previous discussion of systems can now be offered. The self-regulating features found in the feedback circuit are in fact familiar to all in accident prevention. In fact, a dilemma we shall call "the performance paradox" often results.

Briefly this means that as losses are reduced to low levels, the support required of top management decreases. Then as performance worsens and losses increase, management provides more support to reduce losses. Many a safety director has found himself the victim of such vicious oscillation.

SELF-REGULATING FEATURE

If our measures of effectiveness are accurate (and it is suggested that this is rarely the case) then such regulating aspects are to be expected. Typically, however, our measures of effectiveness are too narrow, changes in performance not actually statistically significant, the relationship between control effort and system output is not known and worst of all the safety director subconsciously or consciously may present a glowing but unrealistic picture of safety performance to top management, creating a false impression. At any rate this is a basic self-regulating feature of the accident prevention system which must be designed *for* and not against.

The critical function is the production system. Safety is not antithetical to production, it complements it. Without production there is no need for accident prevention. The ultrastability of the system is provided by management support which, by the allocation of resources can prevent the collapse of the accident prevention system.

Redundancy is demonstrated by the various channels used for control of unsafe conditions and unsafe acts, eg, engineering, maintenance, education and training, placement, medical etc. Loss of any one of these methods used in combating accidents would not cause the system to collapse.

In fact, it is well known that changes in emphasis will often have little effect on performance. This may be an indictment, however, on the relative effectiveness of our accident prevention efforts.

Every system strives for equilibrium despite changing environments. Lack of such equilibrium means over and under control and subsequent oscillations. Such oscillations in the safety system can come from a number of sources such as, (a) shift in management goals; (b) the introduction of new processes and new hazards; (c) an increase in new unindoctrinated employees; (d) changes in company safety policy; (e) changes in accident prevention personnel and; (f) changes in legal requirements.

The same mechanism used for system control must dampen out the relative influence of the causes described above. This won't occur by chance, however, it must be designed *into* system control.

CONSIDER OTHER ASPECTS

There are also several other aspects to the industrial safety picture. The level of support provided by top management is influenced by outside pressures such as legal, social, moral, unions, insurance, voluntary organizations, community and other pressures. These may have more influence at any one time than actual plant performance and will certainly affect management's estimation of desired output.

The key decision made at the center for safety

operation is the allocation of time and investment to the various control functions. The proper use of these control methods depends upon causal analysis of the data collected from the system. These data include the reports of inspections for unsafe behavior and unsafe conditions in addition to accident and health losses. The previous assumptions now become evident in the systems approach.

OUTCOME OF UNSAFE ACTS

The probabilistic outcome of unsafe acts and conditions is but one of the classes of reported data. Since losses are probabilistic in nature they would be analyzed in accident analysis by statistical methods.

No distinction is made between health and accident losses. An occupational disease can be thought of as an accident in slow motion whereby longer exposure to the unsafe condition is required. Unsafe behavior plays a minor role in disease contraction once the health hazard is present. Although control of industrial hygiene hazards require specific knowledge in medicine and engineering it still is completely described in the systems format.

Interestingly enough, the influence lines between man and the environment are especially relevant in industrial health. It is known that unsafe conditions can breed unsafe or sloppy operator behavior and vice versa. It is also true that unhealthy environments can lead to unsafe behavior which in term can lead to hygiene hazards and accidents.

Certain problem areas in safety are highlighted by this conceptualization. *The first and perhaps most important is the question of what constitutes a measure of system performance.* Because accident frequency and severity are so susceptible to chance, one can have little faith in accident frequency and severity rates as true measures of system performance. The systems approach suggested herein points to the measurement of unsafe behavior and unsafe conditions as the proper criteria.

The logic for this statement lies in the fact that the control measures used, eg, education, supervision, maintenance, engineering etc. are designed to first reduce the occurrene of unsafe behavior and unsafe conditions and secondarily to reduce the consequences of these criteria, namely accidents and occupational diseases.

RELATION TO PRODUCTION

Few measures of safety performance are related to production performance. Yet to divorce production output from safety presents the false impression that they are unrelated. At present there is no easy solution to this measurement problem. Recent research at Ohio State University suggests that measures of unsafe behavior might provide measurement validity, reliability, efficiency, meaningfullness and amenability to statistical analysis—all of which are requirements for a good measure of system effectiveness.

A second problem involves the crucial determination of the effect of accident prevention methods on system performance. This is a three dimensional problem involving time, level of effort and type of effort. This is a paramount problem today for the accident preventionist. He cheerfully increases inspection effort and/or safety training in the hope it will pay off.

In some circumstances it seems to help—the crude index of safety, the AFR decreases. In other cases the increase in emphasis with method X results in a perplexing increase in accidents. Why?

There are many possible explanations ranging from, (a) the fact that method X has a delayed effect and hence not a direct cause to the rise in accidents to, (b) the idea that no change has really taken place. (The accident rate has experienced no statistically significant change.)

TRIAL AND ERROR APPROACH

The truth of the matter is that present employment of various prevention methods is a trial and error approach with little more than prayerful expectations. We desperately need research in this area. There is no reason why we can't quantify under given levels of statistical confidence the effect of safety training for example, on worker behavior.

Moreover, the cross effect of concurrent accident prevention methods, accident levels within the plant, production rates, etc. can be factored out in this analysis. This particular problem re-enforces the need for an acceptable criterion function or measure of system effectiveness. It is also a declaration of the need to apply rather simple scientific methods to the optimization of safety programs. The choice of unsafe behavior as the criterion variable would appear an appropriate start for several reasons.

First and foremost, the majority of accident prevention methods are designed to modify worker behavior. Second, using a frequency measure of unsafe behavior would provide sufficiently large enough samples to allow the use of powerful statistical tests. Thirdly, this measure avoids the probabilistic outcome severity-wise of unsafe behavior coupled with unsafe conditions.

INPUT-OUTPUT RELATIONSHIP

In effect, safety must leave the dark ages of trial and error and attack the input-output relationship of the accident prevention system.

This brings us to another fundamental problem illustrated by the systems context, namely to what level of control should the system strive? In other words what are reasonable goals or objectives for the system?

Elimination of accidents and unsafe behavior is more than altruistic. It goes against knowledge of human nature. If minimization of unsafe behavior and unsafe conditions (and their consequences) is deemed the answer, then the question arises—minimize to what?—the nebulous irreducible minimum?

This question could be resolved by the specification of expected performance from top management.

We can, however, provide simple quality control charts for our system performance function to describe changes or trends in performance. The maximum gain safety-wise will depend upon results of the input-output analysis previously described.

Hence, the optimum or acceptable level is a function of what we can expect to achieve under various levels of effort, the sensitivity of performance with accident prevention methods, the investment authorized by management, the expected rate of return on investment and the level acceptable to worker, legal and community standards. The latter cannot be dismissed as unimportant since these represent pressure groups which influence top management decisions.

What then are the benefits to be derived from a systems view of safety that we don't already possess? First of all, a systems approach centers our attention on the fundamental problems in accident prevention and provides guide lines to the solution of the crucial problem areas discussed above. By considering accident prevention in this context we can design safety functions and programs which are integrated into a totality which is more effective than the mere sum of its parts.

PROVIDES "BIG PICTURE"

It provides us with the "big picture" rather than the day to day frustrations associated with fire-fighting. In addition, by taking the aggregate view we can avoid trivia in seeking maximization of system performance.

By a systems conceptualization we can see the integration of key functions of accident prevention, their relation to top management and the production system. The systems approach avoids certain difficult problems. It is far easier, for example, to measure and control mass behavior than individual behavior.

We can also make use of statistical analysis, usually made difficult by lack of sample sizes at present. One of the key advantages here is the analysis of performance trends and differences in the effect of accident prevention methods. By studying the variance in system output we can identify those factors which play dominant roles in system performance.

JUDGE PERFORMANCE INDICES

We can find which indices of performance are most sensitive to changes in accident prevention methods. We can evaluate the effect of propaganda media, contests, supervision, inspections, accidents etc. on systems unsafe behavior.

Borrowing methodologies from O.R. we should be able to use programming models in the optimum allocation of inspection activities, information theory in safety communication to the workers, and human engineering in the design of equipment for safe human use.

In summary, the argument about engineering vs. management approaches is taken to be a trivial one, save for the issue of educational preparation of accident preventionists.

In this regard it is argued that the future accident preventionists must have systems appreciation and moreover be versed in scientific methods, particularly statistical methods. The safety director must be a first rate coordinator, diplomat, and accountant versed in fiscal considerations. He must further have at least minimum knowledge of the disciplines he hopes to utilize, psychology, engineering, medicine, personnel relations, and industrial hygiene.

MATHEMATICS AND STATISTICS

He must be able to use and understand mathematical and statistical methods. He must be conversant with legal restrictions and workmans compensation. In addition to all this he must have the systems outlook so that he can show relevancy of component effort in the total picture.

The systems approach described above demonstrates clearly that accident and disease prevention requires a multidisciplinary attack. Here we see the logical place for medicine, engineering, management, personnel relations, and psychology in safety.

There is an unmistakable tie-in of the safety subsystem and production system through top management. Without management support through authorized investment, the safety subsystem is doomed to failure.

To reach top management it is further argued that a systems approach will make more sense to the executive who must of necessity think in terms of system inputs and outputs.

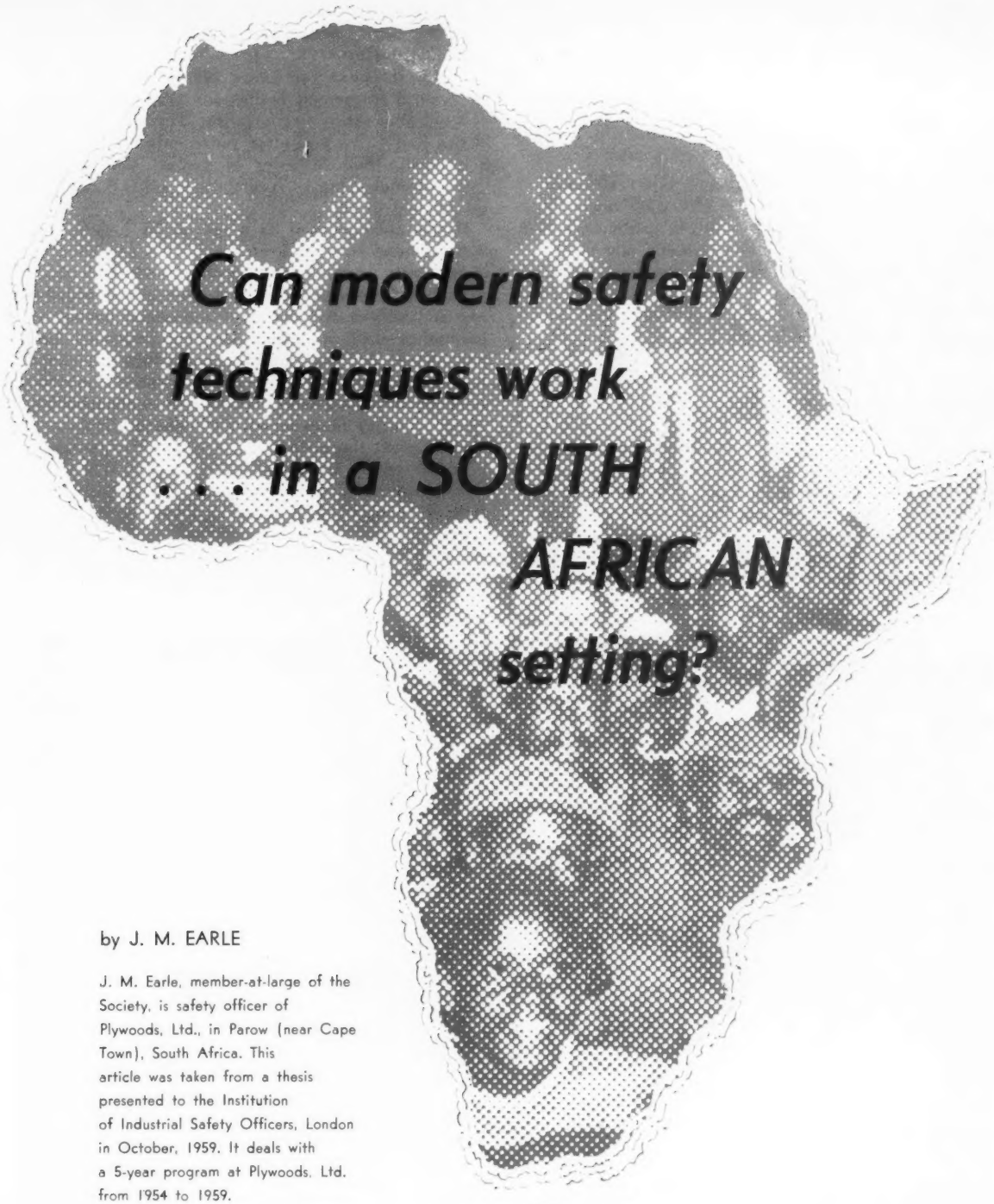
The idealized system has built into it several channels for communication to the worker and several different kinds of information reported to management, eg, rate of return, trends in safety performance, relation to production etc. It is suggested that "loss concepts" have the greatest significance in such reports.

TOTAL SAFETY PROBLEM

The real challenge in the future of accident prevention is whether we can elevate our outlook to see the total safety problem. With limited manpower and resources available to combat accident and health losses, we must make more efficient use of our efforts, utilizing the methodologies found in other man-machine systems developed in systems engineering and operations research.

The challenge is not easily met—our problems are not simple. The human equation makes systems analysis exceedingly complex. Yet, here is where research is needed. Were we to attack the safety problem as vigorously as medicine attacks cancer we would be able to make real progress in better understanding and combating the accident phenomenon.

Surely our needs are just as great and worthy of research. Until we adjust our perspective to include the whole, we can't expect a major breakthrough in safety progress.



Can modern safety techniques work . . . in a SOUTH AFRICAN setting?

by J. M. EARLE

J. M. Earle, member-at-large of the Society, is safety officer of Plywoods, Ltd., in Parow (near Cape Town), South Africa. This article was taken from a thesis presented to the Institution of Industrial Safety Officers, London in October, 1959. It deals with a 5-year program at Plywoods, Ltd. from 1954 to 1959.

How successful would "borrowed" safety techniques used in Europe and the U.S. be when applied to the multi-racial situation in South Africa? Here is how a South African plywood factory met this problem.

Prior to the end of World War II, little organized effort had been made in the Union of South Africa to reduce the industrial accident rate. The South African Factories Machinery and Building Work Act of 1941 was based on the British Factories Act, and laid down similar regulations for the safeguarding of machines and the protection of workers.

Factory inspectors carried out occasional routine inspections and investigated accidents resulting in

SOUTH AFRICA continued

serious personal injury or damage, but their numbers were limited, and the scope of their work restricted as they confined themselves principally to regulations covering machinery, boilers, and power. They had, therefore, little effect on the overall accident situation. The human factor received little attention and safety training was practically unknown in secondary industry.

Red Cross forms safety group

At the conclusion of hostilities the South African Red Cross Society in Cape Town, seeking new spheres of activity to replace those ending with the restoration of peace, formed "The First Aid and Prevention of Accidents in Factories Committee." The aim of this committee was to interest industrialists in accident prevention.

The work was financed by a small subsidy (£36 in 1946) granted by the Workmen's Compensation Commissioner. A selection of posters was obtained from the United States and distributed to industrial organizations.

Within the next four years an approach was made by several interested bodies for the establishment of a national safety organization. Through the work of the Red Cross and after representations by B. J. Schoeman, then Minister of Labor, the National Occupational Safety Association (N.O.S.A.) was established in 1951.

It was incorporated as a non-profit organization with its head office in Pretoria. With a £40,000 grant from funds administered by the Workmen's Compensation Commissioner, the Association established regional offices in the chief industrial areas, appointed a staff of field officers and formed local committees to "promote the prevention of occupational accidents and diseases; to promote and encourage industrial safety work; and to act generally as an advisory body on all such matters."

How great the need was for such an organization is indicated by statistics issued by the Workmen's Compensation Commissioner for that year. These figures revealed that in 1951 there were 160,832 reported cases of industrial injury, £3,357,128 being paid out in compensation and medical aid. This was the equivalent of an industrial army of 60,000 work-

● This picture shows a view of one of the entrances to the Plywoods, Ltd. factory before adequate housekeeping procedures were instituted. A worker had been crushed between the two logs (A and B) shown in the entrance.

ers idle throughout the year. It was also equal to 10 per cent of the Union's total labor force. Applying the 4 : 1 ratio, the total cost to the country's economy was nearly £17,000,000.

In 1955, N.O.S.A., by voluntary agreement, took over the work of the first industrial safety committee in South Africa—The South African Red Cross Accident Prevention Committee—in Cape Town. With increased financial resources (the Cape Town area now being allocated £2,000 a year) accident prevention activities increased rapidly.

A full-time organizer was appointed who visited factories and other organizations, offering a free service which included assistance in forming Works Safety Committees, supplying safety posters, and giving technical advice. Later, series of training courses for part-time safety officers were held and by 1958 more than 300 candidates had received certificates of attendance.

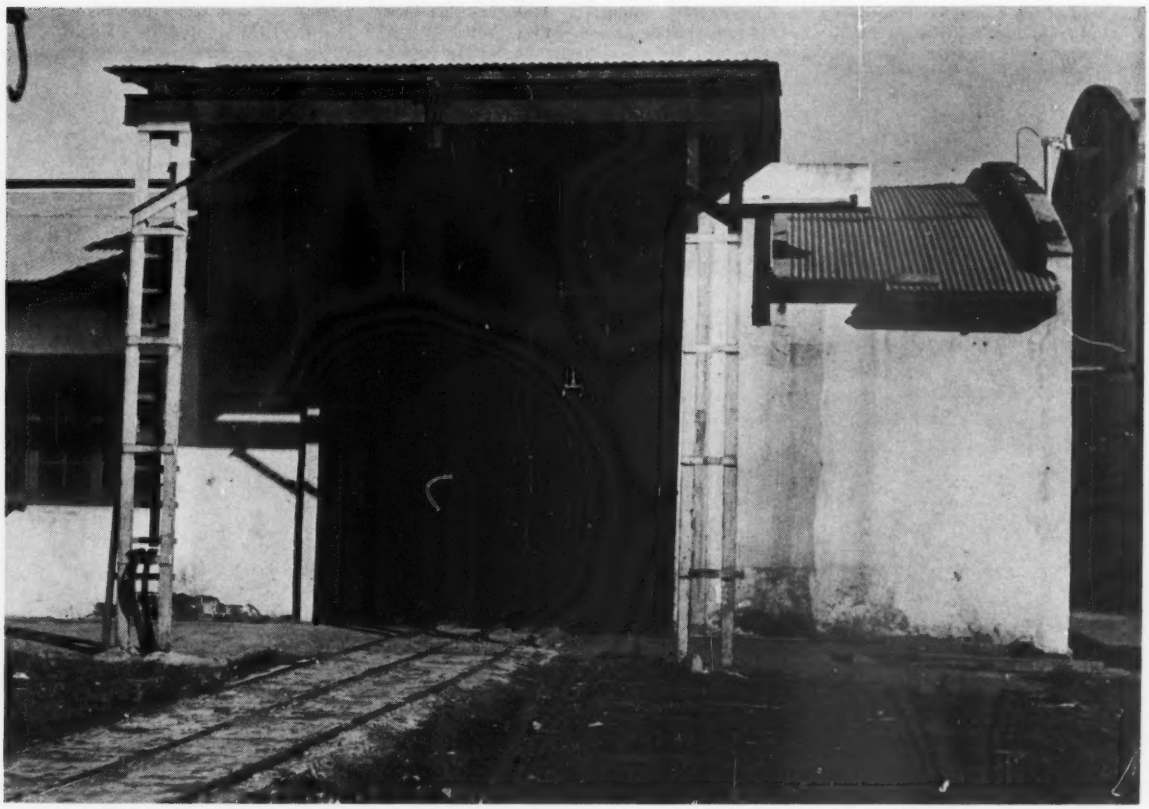
The response by industry to the efforts of N.O.S.A. was positive and sustained, one of the many members being the Cape Town Municipality, employing a labor force of 10,000. At that time the Cape Western Regional Safety Committee had 22 representatives from industry.

There were few full-time safety officers in the Cape, but a number of officials and executives were by now performing that function on a part-time basis. Towards the end of 1958 a movement was made to form a South African Institute of Industrial Safety Officers which would work in close collaboration with N.O.S.A.

Established in 1920, Plywoods Ltd., located in Parow, near Cape Town, began manufacturing operations in a small wood and iron shed with a labor force of fewer than 50. For several years business growth was slow but when success came it came quickly. Plenty of space being available, new buildings were erected and extensions to existing ones were added in a somewhat haphazard manner, resulting in a number of sheds covering several acres, where in place of a production flow, there was a transporting back and forth of material in process.

In 1954, with a labor force of more than 800, the Company's chief products were plywood, laminated and block board panels, flush plywood doors and a small quantity of chipboard (particle board) manufactured experimentally from offcuts and waste.

A new factory had been planned for erection on an 80-acre site in a nearby suburb and with this transition in mind, the existing factory had been allowed to fall into disrepair. It had not been considered worthwhile spending money on premises which were to be evacuated. At the end of 1953



• The same entrance pictured on the previous page after it had been cleaned up. The passage was cleared, the overhang repaired and strengthened and in general many improved housekeeping procedures were in evidence.

SOUTH AFRICA continued

however, the Board felt that in view of prevailing economic conditions, it was not practicable to proceed with the building of a new factory, and it was therefore decided to remain in the old one.

Thus in 1954, the existing factory was in a condition conducive to a high accident frequency. Housekeeping was unheard of. There were no permanent gangways, any available space being used as storage for stocks or goods in process, and internal transport had to negotiate a way through departments as best they might. Any space cleared for their passing was generally refilled immediately behind them.

Factory lighting inadequate

Lighting was inadequate—existing electric globes were covered with dust and wood flour. More than 1,000 window panes were broken and had been boarded up with plywood.

A few safety notices existed but on the whole no accident prevention measures were in operation as the factory supervisory group as well as the run-of-the-mill worker mostly regarded accidents as an inevitable concomitant of the wood-working industry.

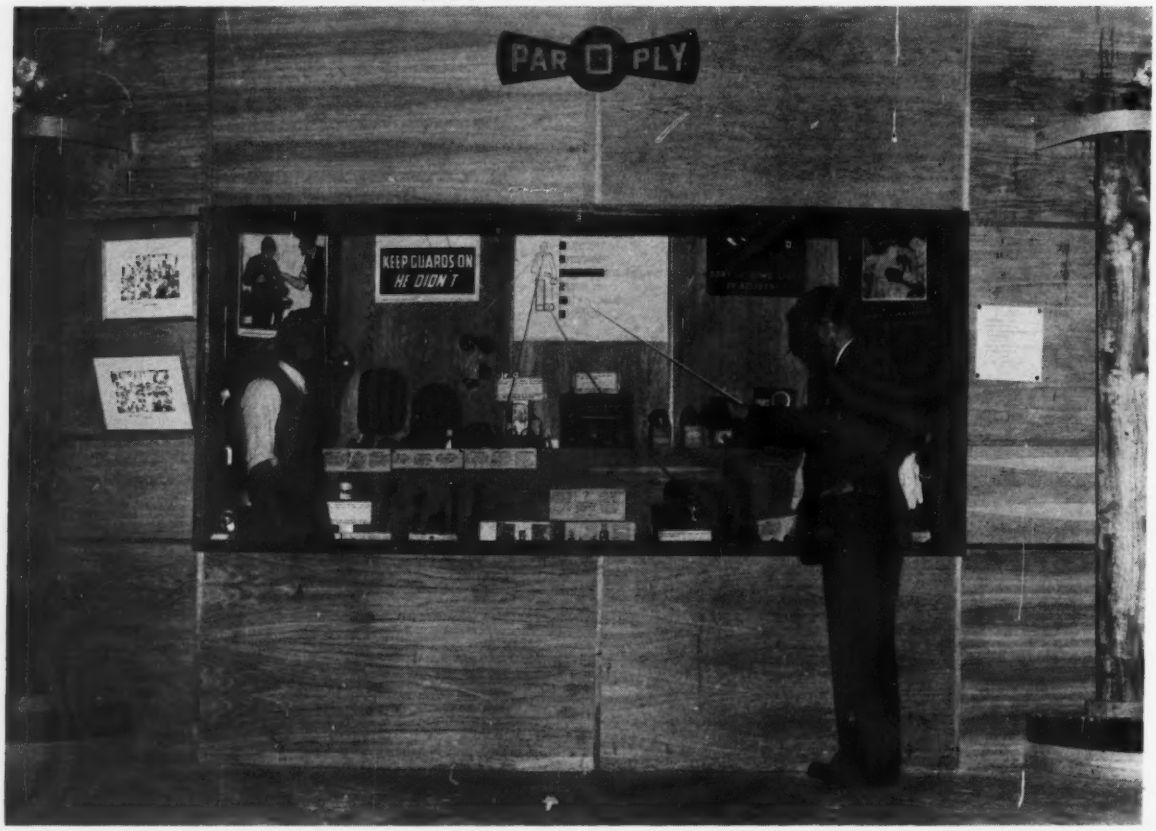
In September, 1953 however, the Board appointed a new personnel officer who was also an experienced safety officer and had served on the Red Cross and the N.O.S.A. Safety Committee since 1948.

Having made a survey of the factory and the accident rate from available data, he found that both the frequency rate and annual premiums (fixed by the Workmen's Compensation Commissioner) had increased considerably during recent years, reaching a peak of 90.69 in 1951. This high frequency, with few apparent steps being taken to reduce it, was viewed with disapproval by the Factory Inspectorate, while the disruption to production through loss of manpower was a source of inconvenience to foremen and a weighting of overhead costs to the firm.

The personnel officer accordingly drafted a report based on his survey and made the following recommendations:

- The appointment of a safety officer.
- The formation of a safety committee.
- The introduction of safety training by means of posters, films, demonstrations, such training courses as were available to supervisors, and reference books, periodicals and bulletins.

● A part of the Exhibition Stand during the company's first Safety Week in 1955. In addition to the exhibition of safety equipment and fire-fighting equipment, safety films were shown daily during lunch hours.



● Safety Week, 1957—Note overprinting of "Guard Your Hands" posters in Afrikaans and Xosa.

- The introduction of disciplinary measures against employes who caused accidents or injury through the willfull violation of rules, neglect or deliberate disobedience, or who submitted false claims.
- The repairing of all workrooms including the reglazing of broken windows and the replacement of inoperative electric lights, thereafter maintaining them in good and clean condition.
- The application of color conditioning throughout the factory, using the safety color code as approved by the South African Bureau of Standards.
- The replacement, repair, and where required, installation of machine guards.
- The bringing of fire-fighting equipment into conformity with regulations.
- The training of volunteer fire teams to work the Company's mobile pump (a relic of the London Blitz which the Company had inported after the war).
- The repositioning and alignment of machines where practicable.
- The marking out and strict observance of gangways.
- The introduction of a general clean-up campaign and the subsequent application of the principles of good housekeeping.
- The establishment of a competition for a floating trophy to be awarded annually to the best-kept department.
- The encouragement of personal cleanliness and hygiene.
- By these and other means available, to inculcate and encourage an attitude of safety consciousness among workers at all levels.

These recommendations were considered by the Directors and were accepted completely. The personnel officer was appointed safety officer and authorized to proceed along the lines recommended.

At this time the labor force consisted of approximately 800 male workers. This group was made up of some 100 Europeans (white); 250 Colored (Half-Caste); and 450 Native (Africans). The European group included all senior and most junior supervisors, technicians, artisans and office staff, skilled operators and security personnel.

Most of the machine operators, vehicle drivers and semi-skilled workers were drawn from the second group (Colored), which also supplied a portion of the clerical and manual labor strength. The Natives were used for the heavy manual labor jobs.

In planning an accident prevention campaign, certain problems had to be considered. The campaign would be based on overseas (European) methods and techniques.

Would safety posters, designed for educated white workers overseas carry any message to illiterate Colored workers and Natives in South Africa? Would political and racial differences, and diverse cultural backgrounds complicate propaganda and

● Workers decorate their safety scoreboard upon attaining 600 accident-free working days. Their department holds the "Best-Kept Department" Shield. The company feels that the introduction of the scoreboard (and a cash bonus) was one of the most effective program devices employed.

SOUTH AFRICA continued

training programs? Could training methods be effectively applied in such a situation and with such a high labor turnover? Above all, how were language difficulties to be overcome?

The language used mostly in the factory was **Afrikaans,** but the firm was an "English-speaking" one and English was the medium used in all line communications. The largest labor group, the Natives, had several dialects of their own, but mostly understood and spoke **Xosa.** The majority of them had a smattering of English or **Afrikaans** and a few were fluent in both. Among this group the belief was commonly held that accidents came "from above" and therefore were inevitable.

It was in the hope of finding a positive answer to these questions that a five-year program was begun at the beginning of 1954, when the average annual frequency rate of the preceding five years was 70.

With the initial plan already drawn up, the campaign fell under various headings and made use of certain well-tried methods. The safety committee was the original "target-area." The plan was put to them and its aim discussed. Areas of difference were examined in detail and suggestions from members considered.

The committee, formed in 1953, consisted of three senior foremen, the factory engineer, the safety officer, the factory manager and the managing director of the company as chairman. It was not considered practicable to include "floor labor" at this stage, but one or two guests were invited to attend each meeting.

Meetings were held monthly and included a discussion of the safety officer's monthly report, progress reports, a review of accidents since the previous meeting, preventive measures considered and any other course of action recommended by the Investigating sub-committee, inspection and either approval or rejection of new safety equipment, appliances, guards, posters, etc., planning of future events, inspection of portions of the factory and safety films or short talks from outside safety men.

Safety Officer notified

Whenever an accident occurred, the safety officer was notified and if circumstances warranted he then called the Investigation committee which consisted of the factory engineer (if machinery or power was involved), the factory manager, one other member of the safety committee and the foreman of the department concerned.

The committee investigated the accident in an effort to determine what went wrong and to avoid, if possible, a recurrence of the same accident.

Other facets of the program included safety weeks, safety record boards, safety posters, improved housekeeping, supervisors' training, selection tests, statistical recording, use of photography and films, the addition of first aid facilities, collection of litera-

● A typical department showing roof supports in process of being painted white to improve lighting. Prior to the introduction of the program, the roof and all lattice work roof-timbers were unpainted and the windows, to a great extent, were boarded up.

ture and reference works, regular safety officer reports.

In 1955 the firm held its first Safety Week, one of the first industrial organizations in the Union to do so. A large exhibition of safety equipment and fire fighting equipment was displayed and safety films were shown daily during lunch hours.

Workers given "spot" awards

In the factory "spot" awards were made to workers observed to be using safety equipment or taking safety precautions and judging took place for a "good housekeeping" trophy. Posters for the build-up prior to safety week had been obtained from the Royal Society for the Prevention of Accidents in Great Britain and the theme was "Good Housekeeping."

Safety Week has now become an annual event to which both workers and management look forward. More than 1,000 entries are received for the various competitions held and it is perhaps significant that no industrial accidents have been reported during a Safety Week.

In 1955 at the recommendation of the safety committee, each department was equipped with a safety record board, in three languages, indicating the number of days which had elapsed since the last time-lost accident. These boards are kept up-to-date and in addition to competing with other departments, each department is in competition with its own previous best record.

On attaining 300 working days without a time-lost accident (working days were later changed to "man-hours worked") all supervisors and floor labor receive a cash bonus, with a further bonus for every additional 100 days thereafter.

The firm is of the opinion that if any one device used in the program could be said to have changed the accident situation, it was the introduction of the safety boards on which workers can see their record improving day by day and the prospects of a small bonus becoming closer.

"Bonus Day" celebrated

This bonus is much appreciated, especially by the lower wage groups and the custom has developed in which the workers bring flowers to decorate their boards when bonus day arrives. In one department, on the other hand, a 520-day record was lost when an operator stayed away with a relatively minor wound. The following morning the record board, which had reverted to zero, had been draped in black by the absentee's co-workers.

The firm found that casual placing of posters in odd corners, leaving them to become soiled and neglected is of little or no value. Their own experience is that systematic and intelligent postering can arouse and sustain interest and has considerable training value.

During the early post-war period safety posters were in short supply and of indifferent quality. Most of them were of American origin and had little impact on South African workers. Later supplies became available from the United Kingdom and in 1955 the company joined The Royal Society for the Prevention of Accidents, thereafter receiving a regular supply of good quality posters from that source. It was nevertheless necessary to overprint these in **Afrikaans** and **Xosa,** usually by hand. This difficulty was partly overcome after the establishment of N.O.S.A. who produced bilingual posters and a series depicting natives with slogans in their own language.

Posters with a strong message, using as few words as possible, have the best effect. Subtle appeals and cheap humor are avoided. The impression should never be created, especially among those of more simple mind, that accidents are funny. The cause of accident prevention is not strengthened by poking fun at those who are injured or making them the butt of puerile wit.

Housekeeping methods changed

Housekeeping methods at the factory underwent a revolutionary change. The factory is a single storied group of buildings constructed of brick with corrugated iron roofs, the supports of which are all of wood. The curved roof, 45 feet high at the apex, was unpainted and windows were to a great extent boarded up.

In 1954 the task of improving physical working conditions was begun. During the first few months more than 1,000 panes of window glass were fitted and two full-time window cleaners were engaged. All lattice work roof-timbers including purlins and beams were painted white to improve light reflectance. Walls were painted in pastel green, and ma-

• The managing director presents the Good Housekeeping Trophy to the foreman of the winning department during Safety Week, 1958.

SOUTH AFRICA continued

chines in deeper tone of the same color. South African Bureau of Standards safety color code was applied and boards explaining in three languages the applications and meaning of the color code, were displayed in every department.

A lighting survey of the entire plant was made and recommendations submitted to the board, who accepted them in principle and passed them to the engineers for implementation in sections, as funds and other circumstances permitted. A "Clean-Up" campaign was instituted and a Good Housekeeping shield awarded annually to the "best-kept" department.

The entire factory was repainted inside and out, and painters employed full-time on painting traffic lines and color conditioning machines. Bulletins, safety films and posters were used to stress the importance and advantages of good housekeeping.

From being a dingy, poorly lighted and untidy factory with no gangways, with rubbish of all kinds heaped in odd corners and littering the floor generally, the factory has become a show place for visitors, particularly those associated with similar industries elsewhere. These visitors have expressed surprise that such a standard of cleanliness could be achieved in a woodworking factory.

In 1957 the firm won the Dr. Blumberg Floating Trophy which is awarded annually by N.O.S.A. to the factory with the best housekeeping standards, best accident prevention organization and most improved accident frequency rate in the Cape area.

● The managing director, who is chairman of the safety committee, presents an award to an employe.

Supervisory training introduced

During the five-year period from 1954-1959, a program of supervisory training was introduced to improve the general standard of foremanship in the factory. Among the training courses held were a first aid course conducted by the South African Red Cross; T.W.I. Job Instruction, Job Relations and Job Methods; part-time safety courses held by N.O.S.A.; and seminars, lectures and film shows. Also conferences conducted by N.O.S.A., the National Development Foundation, Institute of Industrialists and local technical colleges.

While resistance was experienced in isolated instances, the general response to supervisors' safety training was very satisfactory. Before the end of the five-year period it was clear that a spirit of safety consciousness existed throughout the factory at all levels.

Prior to 1954 "on the floor" labor was hired at the factory gate, foremen picking at random any Colored or Native workers who happened to catch their eye. No selection tests or check on previous history took place and the suitability of the men for the type of work they would be given was not investigated. This resulted, as may be expected, in high labor turnover and accident frequency rates.

The European and higher grade labor and staff had been selected through the use of aptitude tests and this practice was extended to Colored factory labor. In 1957 a battery of aptitude tests especially validated for the firm's Native workers was introduced. The company was the first industrial organization in the Cape to use such tests.

Safety Officer carries out program

The Company's safety program, as laid down by the safety committee under the chairmanship of the managing director, is implemented by the safety officer. All statistical records required by law are maintained and further, monthly frequency and severity rates are calculated. In addition statistics are presented periodically in simple diagrammatic form for the interest and information of factory workers.

The use of still photography in the accident prevention campaign was made. Scenes of serious accidents are photographed when possible both for record and for inquiries. Also a large number of the factory labor force seldom see a photograph of themselves. To stimulate personal interest, photographs are taken of employes receiving awards, participating in competitions during safety weeks, or working at their machines. These are exhibited during safety weeks and are a big "draw."

Films obtained from N.O.S.A. chiefly, are shown during safety weeks and periodically to safety com-

● Native applicants for employment being selected by means of aptitude tests.

mittee and other workers. Safety bulletins are issued periodically by the safety officer and are distributed to all supervisors.

Until 1954 the Company had a surgery but no attendant and very little equipment. When a Colored or Native Worker required first aid, another Native (said to have taken a first aid course) was brought from the factory to dress the wound. European workers received attention from foremen who had small first aid boxes in their offices. Standard dressings were left on until the injury either healed or became a case for the doctor—more often the latter.

In 1957 the Company hired a full time surgery attendant. The surgery was fully equipped and injuries received proper treatment. There is no doubt that these facilities played a considerable part in preventing many minor wounds from developing into "time-lost" injuries.

The firm also employs, on a part-time basis, medical officers who are private practitioners and who live close to the factory. These doctors visit the factory daily and also treat the sick under the company's free medical scheme.

In addition to these, a number of supervisors have taken elementary first aid training under the auspices of the South African Red Cross Society.

The company receives a good deal of safety literature from Great Britain and the U.S.A. Bulletins and other publications are received from the Royal Society, the National Safety Council (U.S.), the British Ministry of Labor and the National Safety Council of South Africa. A reference shelf of basic safety books is also available to all supervisors.

Statistics covering the five-year period indicate that the highest frequency rate occurs among Colored workers, with Natives second and Europeans third. The majority of injuries incurred during the first three months of employment and to workers below 25 years of age. A slightly higher percentage of accidents take place during the last quarter of the day shift, than at other times.

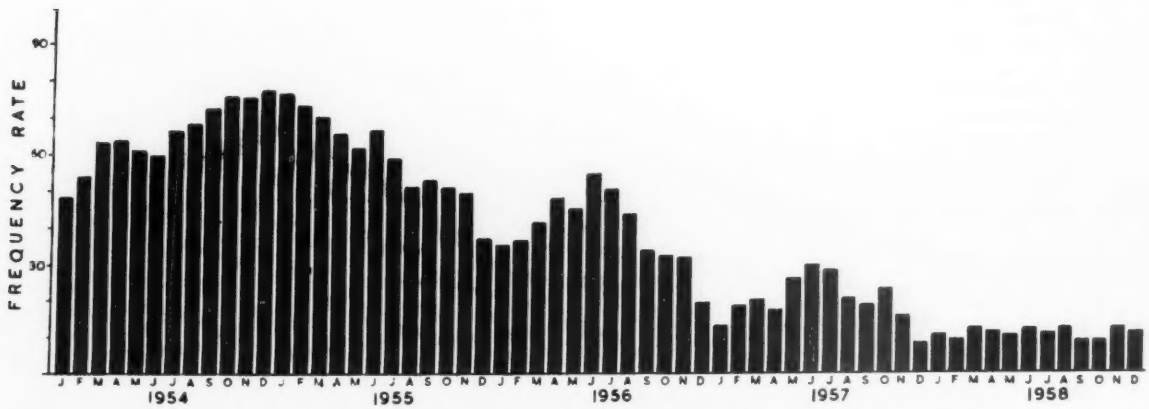
Program costs relatively low

Since the firm's system of accounting did not separate from "general factory expenses" amounts spent on accident prevention, it is not possible to assess the cost of the campaign, although it is known that the cost was relatively low. It has been recommended that in the future this be made a separate item in order to "sell" an accident prevention campaign to management.

There was also difficulty in assessing the average cost of injuries and in this there would appear to be scope for further study.

While the Engineering department of the firm carried out their part of the campaign in a spirit of cooperation, it should be emphasized that the point of attack throughout the period was the individual worker. The positive results which were achieved were largely due to the success attained in fostering a sense of personal participation and in developing an understanding of how most accidents are caused and how they may be prevented.

The campaign followed the generally accepted pattern and it is not claimed that any novel approach was made. It is submitted however, that the application of these accepted and proved methods and techniques was successful and that with modifications to meet varying conditions they can be applied with advantage to multiracial industries in a country such as South Africa, where the labor force is semi-illiterate and multi-lingual.



GRAPH SHOWING MONTHLY FREQUENCY RATE BASED ON AVERAGE OF PREVIOUS SIX MONTHS

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ASSE on the National Scene

EXECUTIVE COMMITTEE MEETING

2 New Chapters Chartered; Approve Record-High Budget

Two new chapters admitted! A balanced budget for 1960-61 and a record-high budget adopted for 1961-62! A report on the revised Constitution! An award to the Junior Achievement Safety Director of the Year!

These were the highlights of the Society's Executive Committee meeting held October 14 in the Conrad Hilton Hotel.

The admission of two new chapters brought the Society's total to 78 as groups in New Haven, Conn. (to be known as the Nutmeg Chapter) and in Norfolk, Va. (to be known as the Greater Tidewater Chapter) were granted charters.

Society Treasurer Frank E. Laderer reported to the meeting that instead of the anticipated $9,321 deficit during the 1960-61 fiscal year, the Society closed the books in September 30 with an excess of $95.00 income over expenses. Actual income for the fiscal period was $113,694 or $4,144 over estimate. Actual expenses were $113,599 instead of the budgeted $118,871 for a difference of $5,272 less than budgeted.

A record-high budget of $135,320 for the 1961-62 fiscal year was approved by the Executive Committee. Expected income for the current fiscal year is $136,456 with an estimate of almost $30,000 coming from advertising in the new *Journal.*

A report was given on the revised Constitution and By-Laws and after a brief discussion was accepted. (The amended Constitution was placed on the agenda of the Annual Meeting held October 16 and one amendment was proposed and accepted. The Constitution was mailed in the form of a ballot to the entire membership on November 15 and will become effective January 23, 1962 at the first Executive Committee meeting of the 1961-62 activity year.)

Following the report of the Special Committee on Junior Achievement given by Chairman Charles C. Albrecht, it was moved and passed that the Society present an annual award to the Junior Achievement "Safety Director of the Year."

In other action which took place at the Executive Committee meeting, a resolution was adopted in honor of John F. Juli who served as Society President in 1957-58. Mr. Juli died on June 10, 1961.

Reports from Region vice presidents, given by Michael F. Biancardi as Society second vice president, indicated that several new groups were preparing to petition for chapter status. Among these are a group to be known as Pike's Peak Chapter in the Colorado Springs and Pueblo, Colo. area; the Mid-Ohio Valley Safety Association in Marietta, Ohio, and the Western Maryland Safety Engi-

Nutmeg, Greater Tidewater Newest Society Chapters

The new Nutmeg Chapter in New Haven, Conn. (Northeast Region) and the Greater Tidewater Chapter in Norfolk, Va. (Southeast Region) bring to the Society two active groups of safety engineers who are expected to contribute greatly to the progress of the Society and the profession.

Both groups began meeting regularly in September, 1959 and qualified for chapter status during the 1960-61 period. The Nutmeg Chapter made its formal request for chapter status in June, 1961 and the Greater Tidewater group submitted its petition in September, 1961.

The Nutmeg Chapter will serve the Southwest part of Connecticut while the Greater Tidewater Chapter will serve members in Southeastern Virginia and in Northeastern North Carolina.

Nutmeg officers are Alfred B. Auerhaan, chairman; Russell P. Ayer, secretary; and Elmer Sandell, treasurer. Tidewater officers include Edward O. Burroughs, chairman; William H. Gaylord, secretary; Oliver E. Holmers, representative; and Gernie T. Spain, treasurer.

neering Society in Cumberland, Md.; groups in the Lehigh Valley, Baltimore and Harrisburg areas; groups in Pensacola, Fla., and Lake Charles, La.; and a group in the Maine-New Hampshire area.

A request by the Milwaukee Chapter to change its name to the Wisconsin Chapter was made to the Committee on Chapters and was approved.

Walter E. Montgomery, member-at-large, whose term ended this year, reported on progress in having the Society emblem registered in Canada. Since Canadian requirements differed from those in the U. S., the application had to be revised, Mr. Montgomery reported. However, he said the new application will be submitted to Ottawa in a short time.

William N. Cox, Jr., chairman of the Committee on Cooperation with Engineering Colleges, reported that the committee had prepared an outline for a refresher course for safety engineers preparing for professional registration exams. He announced that this material would soon be available to chapters. He also discussed a proposal to revise the senior engineering course and proposed that regional conferences again be held for engineering college faculties in an effort to interest them in introducing safety courses into their curricula.

W. Eugene Stuffing, chairman of the Committee on Cooperation with Engineering Societies, reported that his committee had considered a proposal to have the Society affiliate with the Engineers Joint Council. He said that after consideration of all the factors involved, his committee voted to recommend that we do not join at this time. The recommendation was accepted by the Executive Committee. Mr. Stuffing further proposed that the Society seek representation on committees of other Societies such as the S.A.E. Seat Belt Committee.

A request for approval for the use of the Society emblem on Junior Achievement "Safe Operator's Cards" made by Junior Achievement Committee Chairman Charles C. Albrecht, was deferred pending legal advice.

A discussion was held on the type of recognition to be given to Fellows of the Society and it was decided that Fellows be presented with a plaque suitably inscribed.

● Presiding at the October Executive Committee meeting at the Conrad Hilton was Society President George L. Gorbell (top picture). Incoming President John V. Grimaldi is at the right and Frank Laderer, Society treasurer, at extreme right. To the left is the Society's new First Vice President M. F. Biancardi with Managing Director A. C. Blackman at the extreme left. The picture below shows part of the attendance at the Executive Commitee meeting.

Executive Committee Members Take a Short Break . . .

● Robert W. Young, left, W. Eugene Stuffing, center, and Gordon L. Bowen chat during a break in the Executive Committee meeting.

● James L. Dean, Memphis Chapter representative, huddles with Society First Vice President Grimaldi at October meeting in Chicago.

Life MEMBERS

● Holly P. Bradley, recently elected national Member-at-Large, right, is shown as he presented a Life Membership Certificate to Joseph A. Gavin, former safety director of Tidewater Oil Co. at the September meeting of the Tulsa Chapter. Mr. Gavin joined our Society in 1941 and served as Southwest Region vice president during 1955-57.

EDWIN C. HINCKLEY

After a career with Columbia Steel Co. which spanned 37 years, Edwin C. Hinckley retired last June and was recently elected to Life Membership in our Society. Mr. Hinckley had been actively engaged in safety work with the company since 1930 and was supervisor of training at the time of his retirement.

He is a member of the San Francisco Chapter, having joined our Society in 1942. In addition, Mr. Hinckley is a member of the Veterans of Safety and the American Industrial Hygiene Association.

CHARLES W. PARROTT

Charles W. Parrott, Boston Chapter was recently elected to Life Membership in our Society. Mr. Parrott, a member of our Society since 1943, had been with the U. S. Army Corps of Engineers from 1940 until his retirement in 1959. He was divisional safety engineer at the time he retired. From 1916 until 1940 he was associated with various construction firms in engineering and supervisory capacities.

Mr. Parrott has served his chapter as secretary in 1955-56 and as general chairman in 1958-59.

HAROLD L. RUSH

Harold L. Rush, member-at-large, was recently elected to Life Membership. Mr. Rush, a member of our Society since 1942, retired as safety director, Tactical Command, Langley Air Force Base, Virginia, in January, 1961. He had been engaged in safety work with the U.S. Engineers District, the U. S. Army Signal Corps., and the U. S. Air Force from 1935 until the time of his retirement. For his efforts in safety work both during and after World War II, Mr. Rush has been the recipient of three Air Force and two Army citations.

H. L. RUSH

JOHN F. SCHOLTZ

John F. Scholtz, member-at-large, has been presented with a Life Membership in our Society. Mr. Scholtz, who retired as assistant manager of the Paulsboro, N.J. Refinery of the Mobil Oil Co. on January 1, 1961 after a career of 36 years with the company, became a member of our Society in 1946.

FREDERICK A. WASHBURN

Recently elected to Life Membership in our Society, Frederick A. Washburn retired from Employers Liability Insurance Corp. in 1958, after a career of 25 years as a safety engineer with the firm. From 1919 to 1933, he was actively engaged in safety work with Factory Mutual Insurance Co. and Hood Rubber Co.

Mr. Washburn joined the Boston Chapter of our Society in 1942.

CHARLES H. WILLIAMS

After a career in safety work which has spanned 48 years, Charles H. Williams has been elected to Life Membership in our Society. In May, 1961, he retired as superintendent of the engineering and inspection department with the New Amsterdam and U. S. Casualty Co. Prior to joining the firm in 1922, Mr. Williams was for eight years a safety engineer with the U. S. Fidelity and Guaranty Co.

Mr. Williams is one of the early members of the Metropolitan Chapter, having joined it in 1928. He is a member of Veterans of Safety, the American Standards Association and the Insurance Federation of New York.

PAUL C. ZIEMKE

Paul C. Ziemke, member-at-large, has been elected to Life Membership in our Society. From 1947 until his retirement in 1958, Mr. Ziemke was a safety engineer with Union Carbide Nuclear Co. Prior to that, he was in safety work with Tennessee Eastman Co.

P. C. ZIEMKE

Mr. Ziemke, who joined our Society in 1946, served as vice president and president of the Oak Ridge (Tenn.) Safety Council.

● President John V. Grimaldi presents Life Membership Certificates to, left to right, H. Archer Ashton, Mobil Oil Co., past president of the Philadelphia Chapter, Albert T. Metcalf, Bethlehem Steel Co., past president of the Philadelphia Chapter, John T. Williams accepting for Paul F. Neff who could not attend because of illness, and Harry P. Gorman, E. J. Lavino and Co. Presentations took place at the Philadelphia Chapter's opening meeting of the 1961-62 year in September.

JUDGES MEET

Caddell Award Winners Selected

The annual judging of the Chapter Achievement Award reports as submitted by the competing chapters was held September 27 in the Morrison Hotel, Chicago. Making up the committee of judges were Edward Volz, St. Louis Chapter, acting chairman of the Awards and Honors Committee; Virgil L. Womeldorff, national representative, St. Louis Chapter; John E. Appel, general chairman, Greater Chicago Chapter; John R. Stone, Lansing Chapter; and John DePew, national representative, Central Illinois Chapter.

During the course of examining the chapter reports, the judges brought up several points which they felt should be directed to the attention of the chapters.

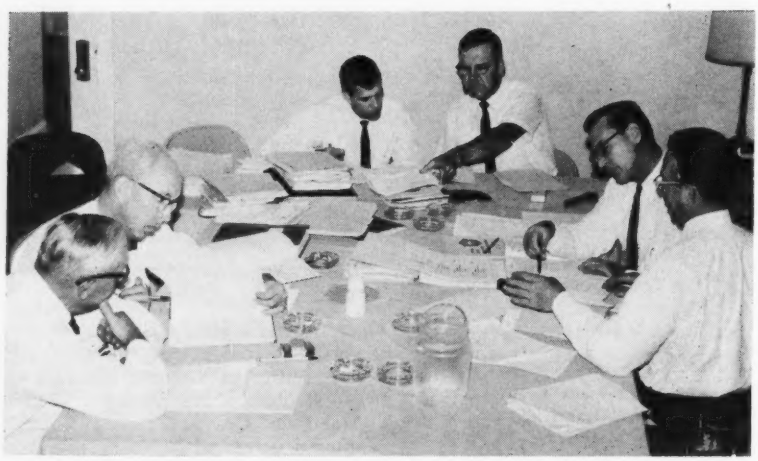
First they commended the reports of the Boston, Central New York, Metropolitan, St. Louis and San Francisco Chapters for their organization, appearance and thoroughness with which they were prepared.

It was noted by the judges that a degree of confusion seemed to exist concerning the type of documentation required to substantiate programs and activities.

Documentation such as the formal announcement of a course, a newspaper clipping, a course outline, letters of invitation, statements of appreciation, a brochure or other items which clearly state an individual's participation, or a chapter's sponsorship, co-sponsorship or cooperation on a project, were considered desirable and of the type intended by the Awards and Honors Committee.

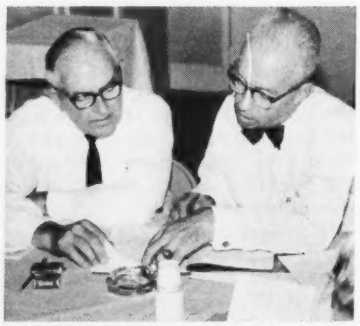
Another area reviewed was that of data sheets and data sheet review. It was decided that a recommendation would be made to the Awards and Honors Committee during the coming year to review the rules which have been established for awarding points in this area.

It was felt that point credits for the review of data sheets should perhaps be restricted to those cases in which constructive comments accompanied the review and that point credits should be awarded to chapters for data sheet development at the time the final draft was received by the National Safety Council.



● Members of the Judging Committee are shown during the annual evaluation held in September for the Chapter Achievement Award program. They are, around the table in a clockwise direction, John R. Stone, John DePew, Jerry G. Pfnister (national staff), Virgil L. Womeldorff, Edward Volz, acting chairman of the Awards and Honors Committee, and John E. Appel.

● Society Managing Director A. C. Blackman, left, Virgil L. Womeldorff and Jerry G. Pfnister review a piece of documentation submitted by a chapter for the Awards program.



● John R. Stone, Lansing Chapter, left, and John DePew, Central Illinois, study the report of one of the competing chapters in the Caddell Award program.

By majority vote the Philadelphia Chapter was acclaimed the winner of the Albert D. Caddell Chapter Achievement award for the 1960-61 activity year. Regional winners were:

Boston Chapter, Northeast Region

Western Pennsylvania, East Central

Georgia Chapter, Southeast Region

Wisconsin Chapter, Central Region

St. Louis Chapter, West Central

Southwest Chapter, Southwest Region

San Francisco Chapter, Western

The New Orleans, South Florida and Western Florida Chapters were cited for high efficiency in the administration of chapter business and their excellent cooperation in the Awards program. These three chapters were presented Commendation Certificates by the Society's President at the Annual Awards Luncheon.

Regional and Chapter Activities

Chapters Mark Society Anniversary

Reports of chapter activities in connection with the Society's 50th Anniversary continued to pour into the National Headquarters this month.

Some of the events reported were:

The Washington Chapter secured a proclamation from the Commissioners of the District of Columbia declaring October 8 to be "Safety Engineers Day" throughout the Washington Area.

The Mobile Chapter obtained a proclamation from Mayor George E. McNally and received extensive local newspaper coverage of the event.

Through the efforts of members of the Central Indiana Chapter, Mayor Charles H. Boswell proclaimed October 8 "Safety Engineers Day" in Indianapolis. The presentation of the official proclamation was covered by local television and reported in Indianapolis newspapers.

The Boston Chapter reported that Governor John A. Volpe of Massachusetts designated October 8 as "Safety Engineers Day" throughout the State in honor of the Society's 50th Anniversary.

Publicity in newspapers in Albany, Troy and Glens Falls was obtained by the Eastern New York Chapter in addition to a proclamation declaring the week of October 8 as "Safety Week."

The Greater Kansas City Chapter was presented with a proclamation from the Mayor of the City honoring the Society for its contributions to the field of accident prevention.

The Penn-Jersey Chapter reported that, through the efforts of its members, the Chapter had secured a proclamation from Mayor Holland of Trenton, N. J. making October 16-19 "Safety Engineer Week." Liberal

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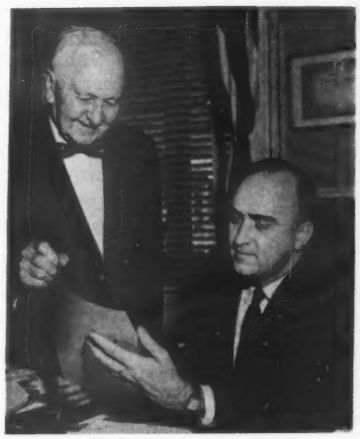


● Mobile's Mayor George E. McNally signs proclamation designating October 8 as "Safety Engineer's Day." Accepting the proclamation is E. J. Karm of the Mobile Chapter.

● Members of the Central Indiana Chapter call upon Mayor Charles H. Boswell of Indianapolis to receive a proclamation on behalf of the Society. Shown, left to right, are Harry A. Tilson, chairman of the chapter's engineering committee; Mayor Boswell; Robert H. Marsh, chapter chairman; and Robert E. Halstead, secretary-treasurer.

● Washington Chapter members receive a proclamation from the Commissioners of the District of Columbia. In the picture are, left to right, John M. Kanak, first vice chairman; Shell E. Martin, chapter chairman; Brigadier General F. J. Clarke, engineer commissioner, District of Columbia; Homer F. Clark, second vice chairman of the chapter.

coverage of the event was obtained in local newspapers as well as the Greater Trenton Chamber of Commerce's magazine.

The Metropolitan Chapter received an official proclamation from Mayor Robert Wagner of New York City commemorating October 8 in honor of the Society's Anniversary.

MOBILE CHAPTER HELPS FORM SAFETY GROUP

The Mobile Chapter, in cooperation with the U. S. Department of Labor, has organized the Greater Mobile Safety Association in an effort to reduce the number of accidental injuries in the Mobile area.

Society members elected to office in the Association include William G. Alsip, maritime safety officer for the U. S. Department of Labor in Mobile, who was elected president. Mr. Alsip joined our Society in 1960 and is presently chapter secretary-treasurer.

Robert E. Bailey was elected second vice president. He is safety manager with Scott Paper Co. Mr. Bailey became a member of our Society in 1960.

Also in cooperation with the U. S. Department of Labor, the Mobile Chapter has been sponsoring a course in safety training for supervisors at the Mobile Center of the University of Alabama. The course is designed to aid supervisors in carrying out the safety functions of their responsibilities.

SW OHIO PARTICIPATES IN SAFETY CONFERENCE

The Southwestern Ohio Chapter was a co-sponsor of the Greater Cincinnati Safety Conference and Exhibit held November 15 at the Sheraton-Gibson Hotel, Cincinnati.

Meeting sessions covered such important areas of accident prevention as industrial fire protection, industrial safety and workmen's compensation, industrial health, and off-the-job safety for industrial workers.

Society President John V. Grimaldi addressed the Conference luncheon on "A New Look at Accident Prevention."

Other agencies participating in the one-day Conference were the Greater Cincinnati Safety Council and the Division of Safety and Hygiene of the Industrial Commission of Ohio.

CHEMICAL SAFETY MAN TALKS IN CHATTANOOGA

At a recent meeting of the Chattanooga Area Chapter of the Society, Patrick McDonough, loss prevention manager, Chemicals Division, Olin Mathieson Corp. discussed his company's approach to overall loss prevention.

He said that a combination insurance and loss prevention department work together to evaluate the possible loss and to determine how much the company can afford. The remaining possible loss is then insured. The company has thus added $40 to $50 million to corporation assets as well as reduced the insurance rate, he said.

● Shown are members and guests at a recent meeting of the Chattanooga Area Chapter. Seated, from left to right, are D. E. Nolting; Patrick McDonough, manager, loss prevention, Chemicals Division, Olin Mathieson, New York, speaker at the meeting; James R. Brown, Chattanooga Area Chapter general chairman; Windom Dale; and C. I. Presswood, Mayor of Ducktown, Tenn. Standing, from left to right, are Hiram Tripp, Chattanooga Area Chapter vice chairman; Hugh Mosher, manager, Olin Mathieson, Charleston, Tenn.; Samuel E. Sharp, chapter representative to the National Society; R. R. Burns, manager, Tennessee Copper Co.; W. P. Fillauer, Mayor of Cleveland, Tenn.; and Emil Green, Mayor of Copperhill, Tenn.

Chapter Clips

■ Five members of the **Greater Kansas** Chapter recently conducted a safety inspection of the grounds and buildings of Park College, Parkville, Mo., at the request of the college. Members making the inspection included Robert L. Mosiman, Charles Williams, Max V. Woodward, James H. Bollinger and Larry C. Zink.

■ The **South Carolina** Chapter recently provided 1,200 scratch pads for registrants at the Annual South Carolina Accident Prevention Conference sponsored by the South Carolina Industrial Commission. The pads carried the name of the chapter and the following message "If you are not a member—you should be!"

■ Members of the new **Nutmeg** Chapter are busy making plans for the Charter Presentation ceremony to be held in January. Committee chairmen have been appointed and invitations will be sent to all nearby chapters, local safety councils and other safety and technical societies.

■ The **South Florida** Chapter has named Ted Lyman and Sam Messer to serve as co-chairmen for the chapter's one-day safety conference for management scheduled for 1962.

■ Members of the **Southwest** Chapter recently voted to enter into a blood bank program. The bank is to be established in the Wadley Blood Center in Dallas, but withdrawals may be made in any recognized hospital in Texas. A blood bank committee composed of Dan Kavanagh, Ellis Cordray, John Martin, John Cannon and Tal Greenawalt has been named to work out the details of the program.

■ Two members of the **Greater Chicago** Chapter were featured as speakers at the American Optometric Association's Industrial Vision Conference held in Chicago just prior to the National Safety Congress. They were John van Cleve who spoke on "Safety Engineers, the Motivation" and Bud Gentry whose subject was "Cutting Accident Rates with Vision Correction."

■ The **Colonial Virginia** Chapter has undertaken a program to secure 100 per cent cooperation from its members in the installation and use of automobile seat belts. The chapter is currently "needling" its members via its newsletter to return a questionnaire sent out in connection with the project.

members IN THE NEWS

BEADLE WINS ATA AWARD

Kenneth N. Beadle, San Francisco Chapter, has been chosen winner of the American Trucking Associations' safety director award for outstanding achievement in the field of truck fleet safety. Director of safety with Pacific Intermountain Express, Mr. Beadle received the award at the October 13 meeting of the ATA board of directors. The program is designed to recognize the efforts of all truck fleet safety directors.

K. N. BEADLE

Mr. Beadle, who holds an MA degree in safety education from New York University, became a member of our Society in 1960.

BIANCARDI HEADS COMMITTEE

Michael F. Biancardi, Society First Vice President, has been serving as chairman of an advisory committee to the Wisconsin State Industrial Commission, for the past year-and-a-half. The committee is proposing the first changes in Wisconsin's Administrative Code on safety since 1949. Thirteen meetings were held from May, 1960 through August, 1961 and public hearings were held recently in five Wisconsin cities.

M. F. BIANCARDI

ON CONVENTION COMMITTEE

Gordon L. Bowen has been named a general vice-chairman of the 32nd annual New York Regional Safety Convention and Exposition. Mr. Bowen is safety and workmen's compensation administrator for the American Radiator and Standard Sanitary Corp. The convention and exposition will be held in the Statler Hilton Hotel, New York City, for five days beginning April 9, 1962.

Mr. Bowen became a member of the Metropolitan Chapter in 1953 and is serving as national representative during 1961-62.

HEADS NEW SAFETY COMMITTEE

William P. Collins, member-at-large, has been appointed chairman of the Industrial Security Committee of the Toledo Area Chamber of Commerce.

Purpose of the recently organized committee is to urge and coordinate protection of industrial property and to minimize the effect of emergencies that may interfere with production and jeopardize the jobs of employes.

Mr. Collins, director, property protection, Libbey - Owens - Ford Glass Co., participated in the recently held Second Annual Industrial Safety and Security conference sponsored by the Toledo Area Chamber of Commerce at the University of Toledo. He joined our Society in 1961.

JANOUS GETS AEC GRANT

John A. Janous, West Virginia Chapter, has been selected as one of seven men to receive an Atomic Energy Fellowship in Industrial Hygiene. He begins his studies immediately. Safety supervisor at the Ravenswood Works of Kaiser Aluminum and Chemical Corp., Mr. Janous will study at the University of Pittsburgh's Graduate School of Public Health under a program administered by the Oak Ridge Institute of Nuclear Studies.

J. A. JANOUS

Mr. Janous joined our Society in 1960.

A. S. JOHNSON RETIRES

Arthur S. Johnson, member-at-large, retired recently as vice president of the American Mutual Liability Insurance Co., Wakefield, Mass. He was manager of the company's engineering department, directing the company's loss prevention activities.

A. S. JOHNSON

Mr. Johnson was a member of the board of governors of the Insurance Institute for Highway Safety and recently was on the executive committee of the Industrial Conference of the National Safety Council.

A graduate of the Massachusetts Institute of Technology, Mr. Johnson joined American Mutual in 1923. He became a member of our Society in 1957.

HEADS SAFETY COMMISSION

Cyril F. Mower, member-at-large, has been named chairman of the Connecticut Safety Commission, a 21-member official State Commission serving as the coordinating agency for highway safety in the State of Connecticut. Mr. Mower, manager of the engineering department of the Bridgeport (Conn.) branch office of the Aetna Casualty and Surety Co., was appointed to the Commission first in 1953 and again in 1959. He was elected vice-chairman in 1959.

C. F. MOWER

Mr. Mower joined our Society in 1946.

HELPS FORM SCUBA CODE

S. C. Rothman, member-at-large, has been asked to aid in formulation of a SCUBA diving code being prepared by the Division of Safety of the Washington Department of Labor and Industries.

The study will cover all aspects of the SCUBA diving industry, including training, physical requirements of the diver, equipment, size of diving crews, methods of diving, signaling and control of equipment suppliers.

Mr. Rothman, who joined our Society in 1945, is a retired major in the U.S. Army. He is a graduate of the University of Pittsburgh.

12 MEMBERS ON SAFETY GROUP

Twelve Society members are serving on the recently established Business and Industry Safety Division of the Greater New York Safety Council.

They are *Dr. John V. Grimaldi,* Society president; *William F. Brown,* Society past president; *Lewis R. Morrison; M. J. Pitre; Carl F. Olander; Arthur F. Fuller; Norman W. Andrews; Alan L. Kling; Russell DeReamer; Paul C. Lamb; Gerald R. Waters; and William E. Dillon.*

The appointments were announced by the division's chairman, Karl T. Dutschmann. The purpose of the group is to devise more effective ways for business and industry to help their employes avoid accidents both at work and away from the job.

Technical Literature

BOOK REVIEWS
STANDARDS - CODES
GUIDES - DATA SHEETS
MANUALS - BOOKLETS
FILMS - VISUAL AIDS

Standards—Codes

Fractional Factorial Designs for Experiments with Factors at Two and Three Levels has been released as a sequel to two other catalogs of designs in the National Bureau of Standards Applied Mathematics Series.

The publication contains a collection of fractional factorial designs for experiments in which some factors are to be studied at two levels or conditions and others at three levels. The document gives plans for the mixed series involving m plus n factors where the m factors each at two levels and the n factors each at three levels for 39 combinations of positive integer values of m and n.

Copies of the 65-page standard may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. at 40 cents per copy.

■ ■ ■

American Standard for Fuseholders, is now available from the American Standards Association. The newly approved standard provided specifications for fuses which have been tested for interrupting 10,000 amperes and for lighting and power circuits in accordance with American Standard National Electrical Code C1-1959.

Copies of American Standard for Fuseholders (Standards for Safety, UL 512), C33.10-1961 are available at 75 cents each from the ASA office, 10 E. 40th St., New York 16, N. Y.

Guides-Data Sheets

Properties and Essential Information for Safe Handling and Use of Boron Hydrides, chemical safety data sheet SD-84 has been issued by the Manufacturing Chemists' Association, Inc.

The data sheet describes boron hydrides—diborane, pentaborane and decaborane—as highly flammable materials with wide combustion limits and warns that their mixtures with oxidizers can be explosive.

Also included are the properties, hazards, engineering control of hazards, employe safety, fire fighting practices, handling and storage, tank and equipment cleaning and repairs, waste disposal, medical management and first aid treatment relative to boron hydrides.

SD-84 is available from MCA, 1825 Connecticut Ave., N.W., Washington 9, D. C. at 30 cents per copy.

■ ■ ■

Chromium-Molybdenum Steel Piping, a guide to welding has been prepared by the American Welding Society.

The 24 page booklet covers the scope, base metals, filler metals, joint design and preparation, preheating, interruption of the preheating-post-heating cycle, and post-heating of these alloys.

Copies may be obtained from the American Welding Society, Technical Department, 345 E. 47th St., New York 17, N.Y. at $1.50 per copy.

Manuals—Booklets

Cleaning Tanks Used for Gasoline or Similar Low-Flash Products, has been issued by the American Petroleum Institute.

The new edition of the safety manual covers the use of suitable mechanical equipment and protective clothing, use of proper cleaning methods, elimination of potential ignition hazards, and provision for means of entrance and exit in an emergency.

Orders for API Bulletin 2016, fourth edition, should be directed to the Institute's Publications Department, 1271 Avenue of the Americas, New York 20, N.Y. The price is $1.00 per copy.

■ ■ ■

Nine revised *Action Program booklets* developed by the President's Committee for Traffic Safety are now available.

The reports on "Motor Vehicle Administration" and "Police Traffic Supervision" are 15 cents each. Also 15 cents each are the separate reports on "Laws and Ordinances," "Traffic Courts" and "Traffic Accident Records." Price for the document on "Education" is 20 cents and the booklets on "Public Information" and "Organized Citizen Support" are 10 cents each. The report on "Engineering" is 30 cents a copy.

Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

■ ■ ■

A Safety Committee Man's Guide, has been published by the accident prevention department of the Association of Casualty and Surety Companies as an aid to safety programming in industrial plants.

The guide outlines the purposes and duties of a safety committee and offers suggestions for winning employe support of safety measures. A checklist for committee use in uncovering hazardous conditions deals with general housekeeping, the handling of tools and other equipment, and in general, with all the physical and mechanical conditions a plant should maintain for maximum safety.

Copies of the booklet can be obtained from the Association at 60 John St., New York 38, N.Y.

Films—Visual Aids

The Science of Fire, a new 16mm color film is available from the National Board of Fire Underwriters for showing to civic groups, schools, and other gatherings. The film may be borrowed without charge.

Information may be obtained by writing the National Board of Fire Underwriters, 85 John St., New York 38, N.Y.

■ ■ ■

Three new educational safety films are being distributed by Charles Cahill and Associates, Inc.

"Trailer Safety" deals with recreational trailer safe handling and "None for the Road" considers the impact of the social drinker behind the wheel of an automobile. These two color films are available for purchase at $140.00. "Horace Horsefeathers" shows, by means of anthropometric dummy, what happens in an auto accident with and without seat belts. Purchase price of this film is $10.00.

The films may be ordered from Charles Cahill and Associates, Inc., 5746 Sunset Blvd., Hollywood 28, California.

Fred W. Braun Retires at Employers; Clyde F. Schlueter Named Successor

FRED W. BRAUN

CLYDE F. SCHLUETER

Fred W. Braun, vice president in charge of accident prevention of Employers Mutuals of Wausau, retired December 1 after 46 years with the firm. Clyde F. Schlueter, manager of the accident prevention department, was named to succeed him as vice president.

Mr. Braun's retirement came only a few months after he received two honors which rank among the highest in his profession:

—He was elected a Fellow of the American Society of Safety Engineers, an honor bestowed upon only seven other persons in the Society's 50-year history.

—The National Safety Council presented him with the only Distinguished Service to Safety Award conferred in 1961.

Few men have made the contributions to safety Mr. Braun has. He organized the Safety Department of the Wisconsin Highway Commission and served as president of the Wisconsin Council of Safety. In 1940 he served as National A.S.S.E. President and has held countless other posts with the National Safety Council, President's Committees and others.

Mr. Schlueter, who joined Employers Mutuals in 1933 is currently Central Region Vice President in our Society. He is also a former president of the Wisconsin Council of Safety and is a member of the National Safety Council's board of directors.

● The Chairman and three principal speakers at the Safety session held during the 12th National Conference on Standards in Houston, Texas, recently are shown above. The conference was sponsored by the American Standards Association. Left to right, they are Ralph E. Johnson, Jr., who spoke on "The Economics of Safety Standards," E. C. McFadden, Past Society President, who served as chairman of the session; H. A. Wagner, who discussed "Safety Standards for Nuclear Power Plants," and J. U. Parker, whose subject was "Governmental Regulatory Safety Codes."

New Members

The following new members, shown by chapter, were elected during the month of October.

ARKANSAS

Frank N. Lovelace

ARK-LA-TEX

Otis L. Tanner

HAWAII

Robert C. Caldwell

LOS ANGELES

Leonard R. Heron

James E. McCarthy

METROPOLITAN

Robert H. Harris

Charles S. Mead

William Pearl

George J. Smith

David C. Strouse

OKLAHOMA CITY

Cecil F. Barnes

Billy E. Chaffin

PUGET SOUND

George T. Loss

ST. LOUIS

Robert H. Tune

SAN FRANCISCO

Robert A. Danse

Paul D. Fulmer

Robert L. Halverson

James W. Hobkirk

John P. Kyne

Thomas B. Nibley

WESTERN MICHIGAN

Jay Bosscher

MEMBERS-AT-LARGE

Kenneth C. Fay

John Kohl

Stanley Kulaitis, Jr.

William R. Parsil

Efton A. Stanfield

DATA SHEET ASSIGNMENTS——A.S.S.E. CHAPTERS

During 1961, a survey was made of all Society chapters who were preparing or revising data sheets as part of the National Safety Council data sheet program. The survey was made by national headquarters in cooperation with the Committee on Technical Publications. The chapters were asked to verify information concerning the number of data sheets in progress, the subjects, the date of original clearance, and the date when outlines were approved and a draft forwarded to the National Safety Council. When this information came in it was reconciled with information in national headquarters and with National Safety Council records in an effort to arrive at an accurate and current list of data sheets in progress.

Another purpose of the survey was to determine the desirability of continuing data sheet projects which were still uncompleted after many years. In some cases the records of the chapters, the national office and the National Safety Council were at variance and where certain doubts exist concerning dates, an asterisk appears in the apppropriate space on the chart below. Chapters who find discrepancies in this list are invited to send information to the national office substantiating their claims. We will make every effort to set the record straight. This list will be published in the *Journal* periodically to show the progress being made in the chapters' data sheet program.

Chapter	Subjects	Date Cleared	Draft to NSC
BOSTON	Bale Breakers and Openers	November, 1959	*
CONNECTICUT	Liquid Nitrogen	November, 1959	*
EASTERN NEW YORK	Paper (Cameron) Slitters	April, 1954	
GEORGIA	Explosive Forming	September, 1960	
GREATER CHICAGO	Portable Metal Scaffolds	*	January, 1961
	Portable Wood Stepladders	June, 1953	
	Personal Radiation Protection Equipment	* January, 1961	January, 1961
	Work Clothing Hazards	January, 1961	
	Overhead Conveyors	September, 1961	
	Roller Conveyors	September, 1961	
	Ladder Maintenance	September, 1961	
GULF COAST	Amines	December, 1955	
	Off Shore Drilling	April, 1957	
GREATER KANSAS CITY	Dough Dividers	February, 1958	
	Dough Mixers	February, 1958	
	Dough Molders	February, 1958	
	Dough Overhead Proofers	February, 1958	
	Dough Panners	February, 1958	
	Dough Rounders	February, 1958	
LOS ANGELES	Duplicating Machines	December, 1956	
	Rebuilding Open Hearth Steel Furnaces	December, 1956	
	Hazardous Materials Procurement	October, 1958	
	Magnesium Thorium Alloys	*	April, 1961
	Ozones	January, 1957	
METROPOLITAN	Working at High Altitudes	March, 1959	
	Working under Compressed Air	March, 1959	
	Handling and Storage of Hydrogen	April, 1961	June, 1957
	Liquid Hydrogen	April, 1961	
NEW JERSEY	Centrifugal Extractors	*(1954)	April, 1961
	Safe Practices for Unloading Flammable Liquids from Railroad Tank Cars or Automotive Tank Vehicles	December, 1959	April, 1961
	Ethylene Gas	December, 1959	September, 1960
	Safety Use and Disposal of Cyanide Hardening Compounds	December, 1959	
	Radioactive Static Eliminators	*(1959)	
NEW ORLEANS	Safe Loading of Grain on Marine Vessels	*(1955)	*(1957)
	Safe Operating and Maintenance of Work Boats	*(1955)	*(1957)
	Raising and Lowering of Portable Well Servicing Units	*	
PHILADELPHIA	Eliminating and Controlling Fire Hazards in Mercantile Establishments	February, 1960	
	Safety Procedures for Shipping and Platform Docks	October, 1960	
SAN FRANCISCO	Decompression Sickness	June, 1955	July, 1961
	Acids and Caustics	February, 1960	
SOUTHWEST	Cleansing and Finishing of Metal Casings	November, 1957	
	Concentrated Hydrogen Peroxide	December, 1956	
	Organizing an Inspection Program for a Construction Job	December, 1957	
WASHINGTON	Explosibility of Colloidal Offset Powder in the Printing Industry	September, 1954	
WESTERN PENNSYLVANIA	Lithium	*	May, 1960
	Chlorine and Chlorine Detectors	*	December, 1959
WISCONSIN	Bottle Filling and Capping	January, 1957	
	Arc Air Process of Removing Excess Metal	January, 1957	
	Epoxy Resins	*	September, 1960

**When the year or month is not shown, it is because records indicate more than one clearance date or date draft was forwarded to the National Safety Council. In some cases when chapter data sheet records were transferred from one engineering committee chairman to another the new chairman wrote and received an additional clearance for a project already in progress.*

Calendar

1961

New York City—American Institute of Chemical Engineers Annual Meeting. Commodore Hotel. ■ **December 3-6**

New Orleans, Louisiana—Louisiana Safety Conference, Roosevelt Hotel. Write Metropolitan New Orleans Safety Council, 823 Perdido St., New Orleans 12, La. ■ **December 10-12**

1962

Detroit, Michigan—Society of Automotive Engineers Annual Automotive Engineering Congress and Exposition. Cobo Hall. ■ **January 8-12**

San Francisco, California—12th Annual Governor's Industrial Safety Conference. Fairmont Hotel. Michael Flagg, Coordinator, 455 Golden Gate Ave., San Francisco 2, Calif. ■ **February 8-9**

Washington, D. C.—1962 President's Conference on Occupational Safety sponsored by the U. S. Department of Labor. ■ **March 6-8**

Denver, Colorado—58th annual American Concrete Institute convention, Brown Palace Hotel. Information from American Concrete Institute, P.O. Box 4754, Redford Station, Detroit 19, Mich. Exhibit information from Mr. Orley O. Phillips, Phillips, Carter, Osborn, Inc., 831 Fourteenth St., Denver 2, Colo. ■ **March 12-15**

Dallas, Texas—23rd Annual Texas Safety Conference and Governor's Highway Safety Conference sponsored by Texas Safety Association. Adolphus Hotel. Information from Texas Safety Association, 830 Littlefield Building, Austin, Texas. ■ **March 25-28**

Pittsburgh, Pennsylvania—37th Annual Western Pennsylvania Safety Engineering Conference and Exhibit. Jointly sponsored by Western Pennsylvania Safety Council and Western Pennsylvania Chapter, A.S.S.E. Pittsburgh Hilton Hotel. Information from Harry H. Brainerd, Executive Manager, Western Pennsylvania Safety Council, 305 First Federal Building, 600 Grant St., Pittsburgh 19, Pa. ■ **March 27-29**

Boston, Massachusetts—41st Annual Massachusetts Safety Conference and Exhibit. Sponsored by Massachusetts Safety Council, Safety Council of Western Massachusetts and Worcester County Safety Council. Hotel Statler Hilton. For Exhibit information write Bert Harmon, Manager, Massachusetts Safety Council, 54 Devonshire St., Boston 9, Mass. ■ **April 2-3**

Cleveland, Ohio—American Welding Society 43rd Annual Convention and Welding Exposition. Technical meetings in Sheraton Cleveland Hotel and Welding Show in Cleveland Public Auditorium. Information from American Welding Society, 345 E. 47th St., New York 17, N.Y. ■ **April 9-13**

New York City—32nd Annual Regional Safety Convention and Exposition sponsored by the Greater New York Safety Council. Statler Hilton Hotel. Information from Greater New York Safety Council, Lincoln Building, 60 E. 42nd St., New York 17, N.Y. ■ **April 9-13**

Chicago, Illinois—American Industrial Health Conference. Sponsored by Industrial Medical Association, American Association of Industrial Nurses and American Association of Industrial Dentists. Pick-Congress Hotel. Information from Industrial Medical Association, 55 E. Washington, Chicago 2, Ill. ■ **April 10-12**

Los Angeles, California—9th Annual Western Safety Congress and Exhibits. Ambassador Hotel. Information from Joseph M. Kaplan, Manager, Greater Los Angeles Chapter, National Safety Council, 3388 W. 8th St., Los Angeles 5, Calif. ■ **April 17-19**

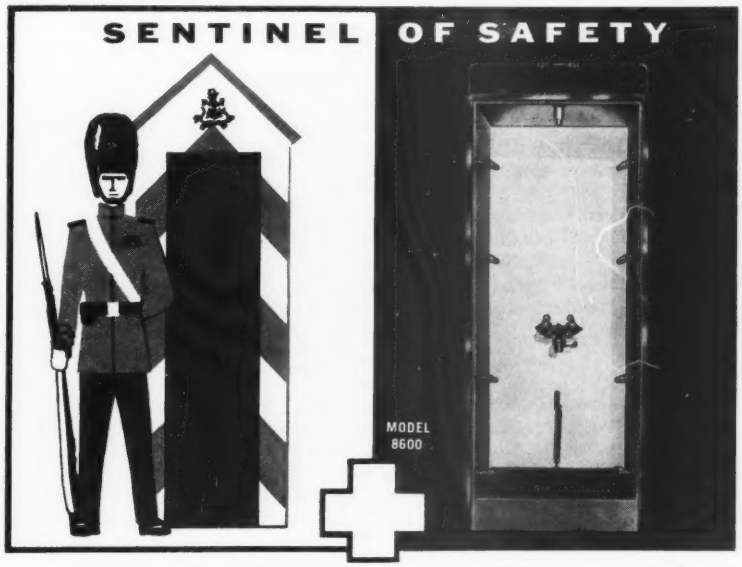
Obituaries

EVERETT H. HORD, St. Louis Chapter, died recently at the age of 57. He had been safety engineer with Olin Mathieson Chemical Corp. at the time of his death. Mr. Hord joined the company in 1931 as a safety inspector and was a member of our Society since 1955. ■

CLAIRE L. LYON, safety engineer with the Scott Paper Co. died September 20. He was 53. Mr. Lyon, a graduate of Colgate University, had been associated with the company since 1937. He joined the Delaware County Chapter in 1943. ■

FRANK H. RHEA, West Virginia Chapter, died recently at the age of 60. Mr. Rhea was state safety consultant with the West Virginia State Department of Labor at the time of his death. Prior to becoming associated with the state agency in 1944, Mr. Rhea was connected with several governmental organizations including W.P.A., Civil Works Administration and Emergency Relief Administration in safety capacities since 1932. He joined our Society in 1941. ■

MORGAN A. WUSTER, died recently at the age of 71. A member of the Metropolitan Chapter, Mr. Wuster joined our Society in 1942. He was elected to Life Membership in 1957. From 1935 until his retirement in 1956, he was a safety engineer with the Maryland Casualty Co. From 1906 until 1932, Mr. Wuster was associated with the Baltimore and Ohio Railroad. ■



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Abstracts

(Abstracts published here come from two sources—Engineering Index, Inc. and the International Occupational Safety and Health Information Centre [CIS]. Abstracts originating with Engineering Index are coded E.I. *Information on the Engineering Index service and copies of original articles may be obtained by writing to:* Engineering Societies Library, 345 E. 47th St., New York 17, N.Y. *Abstracts originating with CIS are coded* CIS *and the code of the national center, e.g.* CIS-USPHS. *For copies of the original articles, write to the national center whose address appears at the end of this column. Abstracts coded* CIS-ASSE *originate with the American Society of Safety Engineers which will supply copies of the original articles at a nominal handling charge.)*

AUSFUEHRUNG, ANWENDUNG UND PRUEFUNG VON ELECTRO-SCHUTZHELMEN. Irresberger, G. *Association Suisse des Electricians Bulletin*, January 28, 1961, Vol. 52, No. 2 pp. 40-2.

Design, use and testing of helmets for protection against electric accidents. Helmets for firemen affording protection against direct or indirect accidents. 37 refs. E.I.

■ ■ ■

CAUTION: HANDLE WITH CARE. Harper, Charles A. *SPE Journal*, Stamford, Conn., March, 1961, Vol. 17 No. 3, pp. 225-230.

Information contained in article covers end use application to safety of handling liquid thermosetting resins. Author covers problems of dermatoses, toxicity, fire hazards, and handling and storage. Organic peroxide safe storage and handling procedures are also outlined. CIS-ASSE

■ ■ ■

CHRONIC CARBON MONOXIDE POISONING. Breysse, P. A. *Industrial Medicine and Surgery*, Miami, Fla., USA, January 1961, Vol. 30, No. 1, pp. 20-22. Bibl.

The author presents various views on chronic carbon monoxide poisoning, showing that the question of the existence of this entity is still unsolved. CIS-USPHS

■ ■ ■

DESIGN AND CONSTRUCTION OF INDUSTRIAL PREMISES FROM THE STANDPOINT OF OCCUPATIONAL SAFETY AND HEALTH (Projektaváni a vystavba závodu z hlediska hygieny a bezpecnosti pri práci). Pokorny, B., and Fiser, L. Práce, Prague, Czechoslovakia, 1960. 46 pp. Price: 1.25 Kcs.

A list (dated 30 June 1960) of Czechoslovak laws, technical regulations and standards designed to protect the safety and health of workers, including basic regulations and those for auxiliary and special buildings. CIS-UHP

ELECTRICAL SAFETY—YOUR RESPONSIBILITY. Cassel, Herbert P. *Nonmetallic Minerals Processing*, Cleveland, Ohio, April, 1961, Vol. 2 No. 5, pp. 27-29.

Safe operating procedures for electrical equipment are outlined by the author. Trends in safety for electrical equipment in the cement industry are indicated as well as features for safety which electrical equipment manufacturers are building into switches, controls, starters, fuse and breakers. The author emphasizes that management, equipment designers, supervisors and workmen have a mutual responsibility to insure safety in industrial cement plants. CIS-ASSE

■ ■ ■

ELEVATOR ACCIDENTS AND ELEVATOR SERVICE COMPANY LIABILITY. Miller, John A. *Elevator World*, Mobile, Ala., September, 1961, Vol. IX, No. 9, pp. 44-45.

Author cites three examples of elevator accidents pointing out where liability usually rests in such accidents. The elevator company, the author says, is usually held liable, either directly or indirectly in such cases, because the courts have held that the company, including its servicing employes, being the acknowledged expert and knowing the potential seriousness of such situations, should take proper action to correct them before injury or damage occurs. CIS-ASSE

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EXPLOSIBILITY OF COAL IN ATMOSPHERE CONTAINING LOW PERCENTAGE OF METHANE. Nagy, J. and Portman, W. M. *U.S. Bureau of Mines—Report Investigations 5815*, 1961, 16 p.

Effect of low percentages of methane (0 to 5%) in air on spark initiated explosions of coal dust; with low dust concentrations, small amounts of methane increase explosion pressure; with larger dust concentrations, small amounts of methane decrease explosion pressure; rate of pressure rise of coal dust explosion increases with increase in methane concentration; effect of convection currents on explosion pressure. E.I.

■ ■ ■

"FREQUENCY-ZERO" MEANS NO ACCIDENTS. Sharp, S. M. *Electric Light and Power*, Chicago, Ill., March 15, 1961, Vol. 39, No. 6, pp. 58-59—124.

As viewed by the Southwestern Electric Power Company's vice-president, the accident-prevention goal of electric utilities must be accident elimination, not just reduction. This can be achieved by eliminating mistakes in planning, construction and operation. Adoption of standards that provide frequency-zero in accidents usually result in economics of construction. CIS-ASSE

■ ■ ■

GERAEUSCHUNTERSUCHUNGEN AN KREISSAEGEMASCHINEN. Pahlitzsch, G. and Meins, W. *Werkstattstechnik*, May, 1961, Vol. 51, No. 5, pp. 250-4.

Noise studies on circular saws; noise as result of blade oscillations; increase of noise with increasing number of revolutions, diameter and width and number of teeth of blade; how to reduce noise. E.I.

■ ■ ■

HOW TO BAN FIRES IN YOUR MILL, Cowan, S. *Textile World*, New York, N.Y., January, 1961, Vol. 111, No. 1, pp. 46-49.

This article covers origins of electrical fires in textile mills, how much they cost, and what mills can do to avoid them. It highlights providing adequate interrupting capacity, providing an emergency power supply, protection against lightening, reliable power for fire pumps,

and safety additives. It also traces how an insurance carrier looks at hazards and his recommendations. Article includes five examples of recent electrical fires and what a textile mill can learn from them. CIS-ASSE

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MANUAL HANDLING WITHOUT STRAIN. Peres, N. J. C. Tait Publishing Co. Pty. Ltd., Melbourne, Vic., Australia, 1960. 11 pp. Illus. Bibl. (Reprinted from *Australian Factory*, Melbourne, Vic., Australia, 1 October 1960, Vol. 15, No. 4, pp. 18-27.)

Summarises the results of recent research undertaken by the author into the medico-mechanical aspects of the human body and the work it has to do in industry. The structure of those parts of the body liable to injury from incorrect lifting techniques is explained and the physiological aspects of possible injuries are examined in some detail. Correct employee placement based on the physical requirements of the job is emphasized. CIS-ADL

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PROBLEMS IN SAFETY GROUNDING FOR LINE WORK. Cassan, J. G. *Electric Light and Power*, Chicago, Ill., January 15, 1961, Vol. 39, No. 2, pp. 50-53—75.

Established procedures for safety grounding and bonding in power-system maintenance and operation are examined by a research engineer of the Hydro-Electric Power Commission of Ontario. The basic hazard mechanisms involved and the requirements of appropriate safety grounding are graphically portrayed. It is concluded that in many practical work situations, grounds alone are in adequate, and conducting bonds must be incorporated into the protective scheme. CIS-ASSE

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PROBLEMS OF SAFETY IN THE LIFTING OF HEAVY OR AWKWARD LOADS (Les problèmes de sécurité en matière de levage des charges lourdes ou encombrantes). Devillard, M. *Manutention*, Paris, France, February 1961, No. 74, pp. 99-104. Illus.

A description of safe methods of handling heavy loads such as locomotives, hydraulic turbines, boilers, etc. The article stresses the two essential points from the safety aspect: (1) the choice and attachment of lifting chains and ropes; (2) the selection and training of drivers of overhead travelling cranes. CIS-INS

■ ■ ■

PROCESSING OF NUCLEAR FUELS. Hanson, C. *Chemical and Process Engineering*, October 1960, Vol. 41, No. 10, pp. 445-7.

Safety considerations in design; most sensitive points for accumulation of fissile material during maloperation are determined and protected by suitable instrumentation; methods of criticality control by limiting mass of fissile material present, by preventing its concentration rising above safe level, or by use of geometracilly safe equipment. E.I.

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SAFETY BARRIER FOR HIGH-LEVEL PLATFORMS. *British Journal of Industrial Safety*, London, United Kingdom, Winter 1960, Vol. 5, No. 54, pp. 64-65. Illus.

The disadvantages of portable fencing for the edges of platforms and floors on to which goods are lifted by fork-lift trucks or other means can be overcome by the use of the hinged safety barrier described in this article. It is constructed in such a way that it can be incorporated in a fixed fencing system, thus providing a continuous guard round the area concerned. CIS-ROSPA

SAFETY FIRST IN EXTRUSION PLANT OPERATIONS. Murphy, A. M. *Modern Metals*, July, 1961, Vol. 17, No. 6, pp. 46-8.

Recommendations for avoiding accidents in aluminum extrusion plants; greatest danger is created by tremendous hydraulic pressures of extrusion press and operation of auxiliary equipment also involves risks. Before 48th National Safety Congress and Exposition. E.I.

■ ■ ■

SAFETY FOR AMMONIA. Olsen, E. A. *Magazine of Standards*, March, 1961, Vol. 32, No. 3, pp. 71-3.

Information on American Standard Safety Requirements for Storage and Handling of Anhydrous Ammonia, K61.1-1960. sponsored and published by the Compressed Gas Association. Standard specifies container design and markings, and requirements for safe installation of valves and their appurtenances, piping and hoses, and safety relief devices to protect system from excessive pressures. E.I.

■ ■ ■

SPECTROGRAPHIC TRACE ANALYSIS OF AIR-BORNE PARTICULATES. Braver, an, M. M. and Masciello, F. A. and Marsh, V. *Air Pollution Control Association Journal*, September 1961, Vol. 11, No. 9, pp. 408-9—427.

Detailed experimental procedure for spectrographic analysis of spot samples of air borne particulates collected on filter tape during brief sampling periods. E.I.

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SUDDEN EXPLOSIONS IN INDUSTRIAL PLANT. Scorer, S. D. *British Journal of Industrial Safety*, London, United Kingdom, Winter 1960, Vol. 5, No. 54, pp. 66-70. Illus.

The article discusses various types of sudden explosions in establishments using boilers. Flue-gas explosions, steam boiler and steam receiver explosions, and vapour explosions are dealt with. CIS-ROSPA

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TESTS PROVE PRACTICABILITY OF 460-KV LIVE-LINE MAINTENANCE. Burgess, T. J. *Electric Light and Power*, Chicago, Illinois, April 1, 1961, Vol. 39, No. 7, pp. 34-35.

A report of field tests made by engineers and linemen of the Hydro-Electric Power Commission of Ontario to ascertain the adequacy and safety of methods and equipment developed for maintenance work on energized 460-kv transmission lines. It was found that linemen provided with conducting shoes, and placed on a platform covered with a grounded metallic grid, experienced no noticeable discomfort. A distance of 12 feet was imposed as a minimum approach of a lineman to the live conductor. The maintenance work was performed with hot-line tools. CIS-ASSE

NATIONAL CENTERS

ADL — *Department of Labour & National Service*
Section, P.O. Box 2817AA
Melbourne, Australia

INS — *Institut National de Sécurité*
Service CIS, 9, avenue Montaigne
Paris 8, France

ROSPA — *Royal Society for the Prevention of Accidents*
Industrial Safety Division, CIS Unit
Artillery Mansions, 75, Victoria St.
London S.W.I. England

UHP — *Ustav Hygieny Práce a Chorob z Povolání*
CIS Unit, Karlovo nám. 33
Prague 2, Czechoslovakia

USPHS — *U. S. Dept. of Health, Education & Welfare*
Public Health Service, CIS Unit
Occupational Health Research & Training Facility
1014 Broadway
Cincinnati 2, Ohio.

Personnel CENTER

(Job openings in safety engineering or in related fields are listed in this column at no charge. Employers may use their address or a Section number if so desired. We will assign the number and forward all applications received. Society members seeking positions may submit "Situation Wanted" notices for publication in this column. Members may use either their address or a Section number. Maximum words for either listing is 75. Copy for listings should be sent to THE JOURNAL, American Society of Safety Engineers, 5 N. Wabash Ave., Room 1705, Chicago 2, Illinois.)

JOB OPPORTUNITIES

The United States Atomic Energy Commission has announced an opening for a safety and fire protection engineer, GS-12, at its Chicago Operations Office, Argonne, Illinois. Salary for the position is $8,995. per annum. The person filling the position will review and develop contractor and AEC safety and fire protection engineering methods and procedures, recommend necessary revisions, and interpret codes, regulations, and standards and advise on their applicability. Knowledge of safety and fire prevention principles, practices and techniques with broad knowledge of civil, mechanical, electrical and industrial engineering techniques and their application to the solution of safety and fire protection problems is essential. Applicants should submit a resume or "Application for Federal Employment," Standard Form 57, to the Director, Organization and Personnel Division, U. S. Atomic Energy Commission, 9800 S. Cass Ave., Argonne, Ill.

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Progressive multiple line insurance company is seeking safety engineer with supervisory potential for Dallas Division Office. Minimum of 3 to 5 years Workmen's Compensation and commercial fleet insurance experience required. Work involves completion of all types casualty and fire underwriting surveys, initiating and following up commercial risk safety programs. Coverage, rating and auditing knowledge desirable. Applicant must be experienced in training new men. Very attractive company benefits. Salary commensurate with training and experience. Send resume to *Section 121, Journal of the American Society of Safety Engineers, 5 N. Wabash Ave., Room 1705, Chicago 2, Ill.*

Safety Engineer wanted for well-established casualty insurance company. Willing to furnish additional training, but prefer some experience in either the accident prevention or inspection ends of the business. No degree required. Travel is at a minimum as most of the work is confined to the Minneapolis-St. Paul Area. Organizational ability important due to minimum amount of supervision in small office. Car furnished, paid vacations, insurance and retirement plan. Send hand-written resume to *Section 122, Journal of the American Society of Safety Engineers, 5 N. Wabash Ave., Room 1705, Chicago 2, Ill.*

SITUATIONS WANTED

Safety Engineering—Age 39, married, high school graduate. Attended Naval colleges for aviation training. Employed in air traffic safety for five years and approximately four years in chemical plant safety. Resume on request. Write *Robert L. Kunkle, 120 Englewood Ave., Avon Lake, Ohio.*

■ ■ ■

Safety Engineer—Six years experience in compensation, liability, and elevator insurance desires location in the insurance field or plant work. Also has five years experience in construction and plant safety with a national concern famous for safety performance. College graduate, good health, age 54, and has no physical deficiencies. Accustomed to meeting management and getting their participation in accident prevention. Has dependents but will be available to travel extensively and can furnish auto. H. O. Anderson, Apartment 6-C, 1178 Piedmont Ave., NE, Atlanta 9, Ga.

■ ■ ■

Safety/Fire Protection Engineer—Desires position with progressive company. Four years college, two years in fire protection. Four years city fire dept., three years safety engineer government and insurance. Three and one half years petro-chemical plant consisting of modern refinery, styrene and butadiene. Experience in security guarding. Instructor in first aid for Red Cross, Bureau of Mines. Willing to travel and relocate. Reply to T. V. Griffith, 4235 Waverly, Odessa, Texas.

■ ■ ■

Safety Director - Manager Staff Services—Fifteen years experience with an integrated oil company in safety, organizational structure study, and general staff service. Also line experience in pipe line gathering system operation. Uses professional management techniques. Can take over or initiate new department. Married, two children. B.S. degree. Member, professional organizations. Can get assignments done. Resume on request. Salary, $15,000 minimum. Write *Section SW-65, Journal of the American Society of Safety Engineers, 5 N. Wabash Ave., Room 1705, Chicago 2, Ill.*

Cost of Dermatitis Runs $100 Million Annually

The annual cost of dermatitis to American industry is $100,000,000, according to a survey by the Association of American Soap and Glycerin Producers, reported by the Royal Globe Insurance Companies.

The report states that 26 per cent of industrial workers face daily exposure to skin irritants and that nine per cent of these contract some form of skin irritation resulting in time lost from work.

"No worker should have to go farther than 100 feet to reach running hot and cold water, a good skin cleaner and clean towels," recommends Royal Globe. "Barrier creams and other protective ointments are helpful in preventing dermatitis if used properly and in time. Solvent repellents protect against certain solvents and greases."

U. of Illinois Launches Air Pollution Project

A three-year study related to air pollution problems is under way at the University of Illinois. It was made possible by a $82,000 grant from the National Institutes of Health of the U.S. Public Health Service to Prof. John E. Pearson of the University's general engineering department.

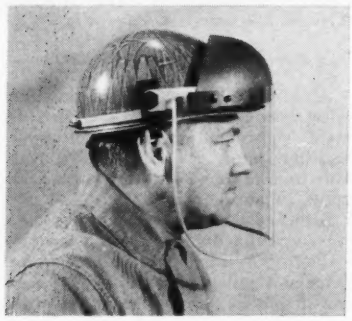
The study will concern the rate of transfer of radon gas from the ground into the atmosphere. Radon, a radioactive gas caused by the decay of small amounts of radium present in nearly all soils, may be used as a tracer to provide information about materials in the atmosphere which cause air pollution.

ITE Supports Revised Traffic Action Program

WASHINGTON, D.C.—During its 31st annual meeting, held in conjunction with the World Traffic Engineering Conference which took place here in August, the Institute of Traffic Engineers:

- Urged cities and states to adopt the recommendations of the Uniform Traffic Control Devices manual.
- Encouraged its members and local sections to increase its participation in areas of research with the Joint Committee on Uniform Traffic Control Devices.
- Reaffirmed its support of the revised Action Program of the President's Committee for Traffic Safety.

New Products



WILLSON KWIK-KLIP HEADGEAR

■ New, exclusive, patented Willson Kwik-Klip headgear which adapts Protecto shields, scarfing shield, welding helmets and goggles so they can be attached to safety caps, are available from **Willson Products Div., Ray-O-Vac Co., Reading, Pa.**

The Willson Kwik-Klip headgear is universally useable and will fit every known make of hard cap. It does this without drilling any holes or altering the cap in any way.

The Kwik-Klip has molded nylon hooks which snap into position over the cap brim. The spring tension at the back of the headgear holds the face shields, scarfing shield, welding helmets or goggles securely to the cap. To remove, the hooks are spread and moved upward.

Swivel action permits the visor or helmet or goggles to be raised up over the cap.

ALUMINUM STAIR TREADS

■ New aluminum stair treads—specially designed with an indented carrier plate for more even load distribution and safety, and a special non-slip corrugated nosing—have just been made available by **Blaw-Knox Company, Pittsburgh.**

The new stair treads match the firm's rectangular interlocked aluminum grating, fabricated through a process that fits cross bars into pre-J-slotted bearing bars under 1,500 tons of hydraulic pressure.

Offset 5/16 inch and cut 1¼ inches deep, the 7/16 by 2¾-inch carrier plates increase weight distribution on the new stair tread considerably over the former notch-type method. Welding now serves only to retain grating position between carrier plates.

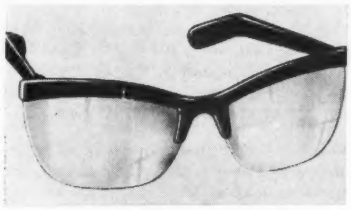
DISTORTION-FREE MIRROR

■ A new safety mirror, providing two views at one glance has been introduced by **Porto-Clinic Instruments.** The Duplex-61-Swiveline mirror, combining close-up vision and wide-angle vision in one self-contained unit is the latest contribution to motoring safety.

Professional drivers know that for maximum rear-view vision and the elimination of blind spots, two mirrors are essential—a regular close-up mirror and wide-angle mirror on both sides of the vehicle.

The mirror is of double-thickness quality and distortion-free. The mounting, finished in chrome plating, is completely adjustable, allowing the mirror head and arm to be swiveled to any desired angle, either separately or together. It comes equipped with a special rachet lock so that it cannot be jarred out of position, once set. A polyethylene mounting gasket and stainless steel Phillips head mounting screws complete the hardware.

Quantity prices are available. Write for free brochure and price list. Address **Dept. DSM, Porto-Clinic Instruments, Inc., 298 Broadway, New York 7, N. Y.**



NEW SAFETY GLASSES

■ A new, lightweight design of safety glasses to protect workers from the danger to sight of flying objects has been put on the market by **General Scientific Equipment Company.** The new glasses combine attractive styling, featherweight protection coupled with low cost.

Some of the semi-hazardous operations where Safety Specs are recommended include spot welding, buffing, woodworking, handtool operations, inspection, protection of prescription glasses, home work-bench chores. When a plant supply room has plenty of Safety Specs on hand, every employee and plant visitor can enjoy complete safety benefits, occasionally or all day, with the utmost comfort.

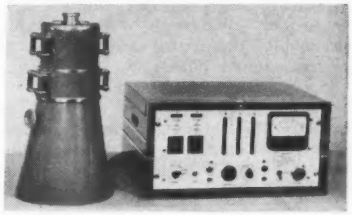
Half-the-weight Safety Specs are priced at $6.00 per dozen with clear or green lenses. Write for complete information or trial order to **General Scientific Equipment Company, Limekiln Pike & Williams Ave., Philadelphia 50, Pa.**

NITROGEN-IN-ARGON ANALYZER

■ A specially designed instrument to analyze traces of nitrogen impurities in argon is now available from **Mine Safety Appliances Company, Pittsburgh.**

Called the M-S-A Spectroanalyzer, the instrument is capable of full-scale calibration in the range of 0 to 20 ppm nitrogen in argon. The new analyzer was developed by the Linde Division of the Union Carbide Corporation. MSA has been exclusively licensed under their patents to manufacture and market the instrument.

In operation, the argon sample is passed at essentially atmospheric pressure into a sample cell, and ionized by a high-voltage a-c source. The ultraviolet radiation thus produced is "chopped" to produce a pulsating light source, which is filtered to pass only those wave lengths characteristic of nitrogen. This light is received by a photo multiplier tube, which transmits an electrical signal to a conventional potentiometer recorder—thus providing a continuous indication of the amount of nitrogen impurities in the argon stream.



NEW VICOUNT SCALER

■ A new and highly versatile instrument for a wide variety of counting operations in nuclear research is the Vicount Scaler announced by **Victoreen Instrument Company.**

Because of its high input sensitivity, which ranges from 10 millivolts to 100 volts, the Model S3HVD Vicount Scaler can be used with equal versatility for Geiger, scintillation, or proportional counting applications. Sensitivity can be adjusted with a built-in function switch which also allows the user to by-pass the amplifier section of the Vicount Scaler and feed pulses directly from an automatic single channel analyzer such as the Victoreen SS-1 Scanning Spectrometer.

Full details on the Model S3HVD Vicount Scaler are available on request to **The Victoreen Instrument Company, 5806 Hough Avenue, Cleveland 3, Ohio.**

WRAP-AROUND EYE SHIELD

■ A new design in lightweight eye shields bids fair to become "standard equipment" for those engaged in chip-

Please turn page

New Products

ping, grinding, buffing, polishing, sawing, riveting and spot welding.

A product of **General Scientific Equipment Company**, the General-I-Shield provides a larger area of protection than usually is offered. A heavy duty opaque visor eliminates overhead glare, while the Plastic Lens is easy to replace.

Spatula temples, plus the addition of an elastic-rubber headband provide maximum safety against slipping. 180 degrees of "down-angle" vision are provided, and the entire effect is one of smartness and efficiency, while delivering an unrestricted vision field.

Further information is available in Bulletin 1171, obtainable from **General Scientific Equipment Company, Limekiln Pike and Williams Avenue, Philadelphia 50, Pa.**

Trade Literature

ALUMINUM GRATING

■ Complete specification data for electroforged carbon steel and rectangular and U-type interlocked aluminum grating and stair treads is available in a new bulletin from **Blaw-Knox Company, Pittsburgh.**

The open flooring and stairs are specially suited for a wide variety of uses in steel, power, boiler, paper, chemical, automobile, food, and aircraft plants; locks and dams; bridges; sidewalks; sewage treatment; utilities; trucks; refineries; coal mines; shipbuilding; and other industrial applications. Copies of the eight-page illustrated bulletin—No. 2581R—may be obtained by writing **Grating Sales Department, Blaw-Knox Company, Blaw-Knox Equipment Division, Pittsburgh 38, Pa.**

CONSTANT FLOW RESPIRATOR

■ Four facepiece selections are now available with a constant flow airline respirator described and illustrated in literature from **Mine Safety Appliances Company, Pittsburgh.**

The facepieces are the Clearvue and All-Vision, both of which protect the entire face and are specially suited in atmospheres irritating to the eyes, and the custom Comfo and Dustfoe half masks.

Designed for attachment to a compressed air system, the constant flow respirator differs from the demand flow type in that breathable air is continuously fed to facepiece of the unit. There is no resistance to inhalation and surplus air flow usually provides a cool, refreshing effect.

Copies of the bulletin—No. 1009-15—may be obtained by writing **Mine Safety Appliances Company, 201 North Braddock Avenue, Pittsburgh 8, Pa.**

INTERCHANGEABLE FACEPIECE

■ A bulletin describing the interchangeable respiratory protection provided with the M-S-A Dustfoe and M-S-A Gasfoe has been released by **Mine Safety Appliances Company, Pittsburgh.**

The four-page illustrated folder shows how one facepiece can be used with a variety of filters and chemical cartridges to protect against dust concentrations, radioactive particulate, metal fumes, organic vapors, acid gases, ammonia, and other airborne hazards.

Details are provided on the Dustfoe 66 with replaceable electrostatic filter; the M-S-A Dustfoe Facepiece featuring the Type "H" Ultra-Filter; and the M-S-A Gasfoe with four interchangeable chemical cartridges. Both models use the same anodized aluminum facepiece.

A guide to the selection of the correct filter for protection against different types of dust and fumes is given on the back cover of the bulletin. Copies of the bulletin, No. 1007-10 are available on request from **Mine Safety Appliances Company, 201 North Braddock Avenue, Pittsburgh 8, Pa.**

FACESHIELD PROTECTION

■ A faceshield that can be quickly attached to either a safety hat or cap, and provides both front and side protection, is described in a bulletin just issued by **Mine Safety Appliances Company, Pittsburgh.**

Features of the M-S-A Skullgard Faceshield outlined in the bulletin include positive friction joint for positioning visor, replacement slot, aluminum pivot arm for swiveling visor, and anchor fastener for making the faceshield a complete rigid unit.

Details are given on available visors, which are made in clear or green-tinted cellulose acetate and in thicknesses ranging from .020 to .060. The faceshield provides protection against abrasive particles, flying objects, and chemical splashes, according to the bulletin.

Copies of the bulletin No. 0302-6 can be obtained by writing **Mine Safety Appliances Company, 201 N. Braddock Avenue, Pittsburgh 8, Pa.**

SELF-CONTAINED OXYGEN MASK

■ A self-contained oxygen breathing apparatus, specially designed for rescue work, and a transistorized communication system for rescue team-fresh air base liaison are highlighted in a bulletin now available from **Mine Safety Appliances Company, Pittsburgh.**

The two-hour McCaa breathing apparatus, available with a mouthpiece type mask or All-Vision facepiece, supplies respiratory protection in poisonous or oxygen deficient atmospheres. The unit features an oxygen admission valve that automatically meets wearer exertion requirements, a positive pressure circulatory system, an efficient Cardoxide absorbent, and a one-piece, leakproof cooler and regenerator.

Battery-powered, the portable communication system includes microphones, amplifiers, loudspeakers, 500-foot reels of two-conductor wire, and a two-conductor heavy team guide line. Copies of the bulletin—No. 0101-1—may be obtained by writing **Mine Safety Appliances Company, 201 North Braddock Avenue, Pittsburgh 8, Pa.**

DEMAND FLOW RESPIRATOR

■ Air supply is conserved and breathing effort minimized through use of a demand flow airline respirator described and illustrated in a bulletin now available from **Mine Safety Appliances Company, Pittsburgh.**

Attached to a compressed air system, the respirator differs from constant flow units in that it is equipped with a small demand regulator which permits feeding of air to facepiece only when the wearer inhales. This conserves air supply and allows one man up to eight hours of service from a standard 220 cubic-foot air cylinder. A high flow rate is supplied with minimum breathing effort.

Three facepieces are available for use with the airline respirator. They are the Clearvue and the All-Vision, both of which protect the entire face and are specially suited in atmospheres irritating to the eyes; and the custom Comfo half mask. Copies of the bulletin—No. 1009-14—may be obtained by writing: **Mine Safety Appliances Company, 201 North Braddock Avenue, Pittsburgh 8, Pa.**

ECHO-FREE ROOMS

■ An 18-page booklet on Anechoic (echo-free) Rooms and their uses is available from **Industrial Acoustics Company, Inc., 341 Jackson Ave., New York 54, N. Y.**

In this presentation the "whys and wherefors" of Anechoic Rooms are fully covered, including their many applications in research and industry, construction details, wedge patterns and acoustic consideration.

Trade News

MSA ADVERTISING MANAGER DIES

■ Chester H. Sanderson, 54, advertising manager for Mine Safety Appliances Co., Pittsburgh, for the past 12 years died October 1 at his home in Penn Hills, Pa. He was with the company for 34 years.

A veteran of World War I, he was a member of the Association of Industrial Advertisers.

MSA FORMS NEW DIVISION

■ Mine Safety Appliances Company has announced organization of a Civilian Protection Division to market air-filtering and oxygen-producing equipment and medical supplies for residential and commercial fallout and bomb shelters.

The new division was formed to "adapt equipment now confined to industrial and military use to meet the increasing need for environmental and individual respiratory protection against fallout from nuclear blasts," according to company officials.

Information for Authors . . . and Members of A.S.S.E.

THE EXECUTIVE COMMITTEE, the Publications Committee and the Editorial Staff of the Society are all resolved to make the *Journal* the most authoritative and informative publication possible for you—the members. For this reason the quality of the material published in the *Journal* must be superior and geared to the needs of our members. It is hoped that in the future, publication of a paper in the *Journal* will carry with it a stamp of authoritativeness, such as no other magazine in the field of safety can presently provide.

The need for a journal which would reflect the purposes and achievements of individual safety engineers has long been felt. A number of our Society's most articulate members—men who are respected by the entire safety profession as leaders in thought and in action—have expressed this need. These men all read and even contribute to other safety publications. Yet, through the years they have demanded that the American Society of Safety Engineers have its *own* journal.

Now the *Journal* is a reality—the goal attained. But the big challenge remains ahead. Now we must produce the kind of journal month after month, year after year, which will fulfill the needs and desires of our members. For this we turn again to you.

You know what kind of material the *Journal* should contain. You have set the high standards. Will you now help us maintain these standards?

We hope you will look to the *Journal* when you have an article or technical paper of *significance* you feel should be published. It is only by publishing the *significant*, the *original*, the *provocative*, and the *inspiring* material you contribute—that we can rightfully call the *Journal* the "Voice of the Professional Safety Engineer."

For prospective authors and contributors, we offer the following information:

Papers presented for publication in the *Journal* should be prepared thoughtfully and carefully. References should be clearly identified and without fear of controversy. Papers should contain a high degree of originality, or make a specific contribution in the area of technical or scientific information, or may deal with practical information so organized or presented as to make a clear contribution to the literature of safety.

Articles submitted should be typed double spaced on one side of the sheet. At least one carbon copy should accompany the paper. The paper should contain the author's full name, title, company connection and membership in the Society (if a member). A brief biographical sketch should also be enclosed as well as any necessary information concerning clearance of the paper for publication. If the paper has been printed elsewhere or delivered as a talk the date and location should be included.

Articles may vary from 1,500 to 5,000 words (from six to 20 typewritten pages, double spaced). Allowances should be made for any photographs, charts or illustrations sent with the paper. Photographs should be glossy prints, suitable for reproduction and should have captions written to identify each picture. Drawings or charts should be prepared carefully in black ink for reproduction.

The Society's newly-revised Constitution states as the purpose of the Society: "To expand the use and effectiveness of Safety Engineering . . ." We are confident that our objectives can be greatly accelerated through the pages of the *Journal*.

George W. Harper, Chairman
Publications Committee

What membership in ASSE offers you

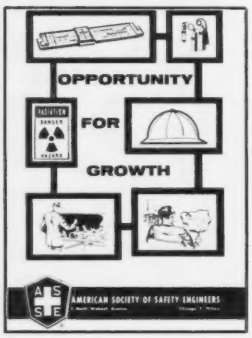
Your status within the safety profession is enhanced by membership in the oldest and largest Society made up exclusively of professional safety engineers . . .

You receive the JOURNAL on a regular monthly basis and through it have access to the presentation of technical papers, research findings and the exchange of ideas . . .

You are provided with information on federal and state legislation relative to safety and on other new developments in your field . . .

You can assist in the development and review of data sheets and other technical and safety materials and work with others in furthering the aims of your profession . . .

Your local chapter's meetings, workshops and discussions will increase your knowledge and with it your value to your community, your employer and the employes whose safety may be in your hands . . .



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